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ABSTRACT

Sixteen expert educators participated in a working conference on the first years of teaching. The proceedings included two commissioned papers, a panel discussion among three persons engaged in on-going induction programs, and large and small group discussions following each presentation. Kenneth Zeichner's paper, "Individual and Institutional Factors Relating to the Socialization of Teaching," argues that the induction process is more complex, contradictory, and context specific than has been commonly thought. In the second paper, "Learning the Language of Practice," Robert Yinger focuses on the design activities of teaching. Susan Barnes, in the third paper, "Induction Programs: Reports from Three Sites," summarizes the presentations of three people directly involved in established induction programs (Oklahoma, Nebraska, and Florida), comparing and contrasting the features of those programs. In the fourth paper, "Teacher Induction Issues: Themes and Variations," Gary A. Griffin and Hobart Hukill highlight the group discussions which followed the presentations outlined above. Four themes noted as emerging were: (1) roles and responsibilities within teacher induction programs; (2) institutional relationships; (3) expectations; and (4) workplace norms and characteristics. Appended is a list of conference participants. (Author/JMK)

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FIRST YEARS OF TEACHING: WHAT ARE THE PERTINENT ISSUES?

Gary A. Griffin and Hobart Hukill
Editors

Report No. 9051

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Austin, 1983

Gary A. Griffin
Program Director
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Preface

The Research in Teacher Education (RITE) program of the Research and Development Center for Teacher Education focuses its work on clinical teacher education. Research has been conducted on preservice student teaching and inservice teacher education. The current research effort is an attempt to understand the influence of formal efforts to work with beginning teachers.

The problems of beginning teachers have been widely documented. This documentation and a growing concern over the quality of the nation's schools have combined to promote the implementation of systematic means to work with new teachers toward successful teaching and effective schools. RITE's decision to study these new efforts was influenced by the relative paucity of information about how best to assist and assess beginning teachers in the nation's classrooms. Through the careful collection of information about ongoing programs, it may be possible to suggest guidelines and promising practices to those states and school districts planning to formalize attempts to work positively with new teachers.

The practice of starting a major research study with a working conference rests on the assumption that the RITE staff will be more informed about the topic under consideration as a consequence of learning about the concerns, problems, and experiences of experts in the field. This assumption led to the convening of a two-day meeting of 16 educators from around the nation. (See Appendix A for the names of participants.) RITE asked these experts in research, schooling, and teacher education to bring to the sessions their suggestions regarding the substance and process of studying teacher induction programs.

The research team was not disappointed. The sessions were productive in terms of increasing understanding, broadening the options for research objectives, and creating greater sensitivity to the difficult issues facing the new teacher and those who wish to help him or her.

The conference participants were stimulated by two invited papers. Kenneth Zeichner presented his views on "Individual and Institutional Factors Related to the Socialization of Beginning Teachers" and Robert Yinger addressed the issue of "Learning the Language of Practice." Both papers are included in these proceedings.

As a way to better understand the conceptual and practical considerations that surround programs designed to increase the effectiveness of new teachers, a panel of persons who work in such programs presented an overview of that work. Debra Tennyson-Carlton described the Oklahoma effort, Elizabeth Dillon-Peterson discussed the Lincoln, Nebraska program, and Charlotte Springfield talked about the Florida new teacher program. Susan Barnes summarizes these presentations in this document.

The participants met in large and small groups during the two days. The group discussions were particularly rich in their illumination of issues that are or should be dealt with in beginning teacher programs. These issues are summarized and presented in the paper by Gary A. Griffin and Hobart Hukill.

The RITE research team came away from the conference with considerably more insight and information than had even been hoped for. We are very grateful to the 16 scholars and practitioners who shared their scholarship and their experience with us. We believe that the information in these pages can be of value to any persons or agencies concerned with the first years of teaching.

Gary A. Griffin, Program Director

October 1983

Abstract

Sixteen expert educators were invited to participate in a working conference on the first years of teaching. The proceedings included two commissioned papers, a panel discussion among three persons engaged in ongoing induction programs, and large and small group discussions following each presentation. Kenneth Zeichner's paper is presented first, wherein he argues that the induction process is more complex, contradictory, and context specific than has been commonly thought. In the second paper Robert Yinger focuses on the design activities of teaching. He shows that the development of a language of practice parallels the movement from novice to expert. In the third paper Susan Barnes summarizes the presentations of three people directly involved in already established induction programs, comparing and contrasting the features of those programs. In the fourth paper Gary Griffin and Hobart Hukill highlight the group discussions which followed the presentations outlined above. Four themes emerged: roles and responsibilities within teacher induction programs, institutional relationships, expectations, and workplace norms and characteristics.

Individual and Institutional Factors Related to the Socialization of Beginning Teachers

I have been asked to address several specific questions today related to what has been termed the process of institutionalization in relation to beginning teachers. Within this relatively broad area that is concerned with how an individual becomes a professional teacher, several specific problems have been formulated for my perusal:

(1) How do beginning teachers adapt to the existing regularities in specific contexts with their rules, regulations and mores?

(2) How are institutional regularities communicated to beginning teachers; how are desired behaviors reinforced; and how is the monitoring and evaluating of beginning teachers carried on?

(3) How do beginning teachers find out (if they do find out) how things get done in a particular context, how to get things done, and who does what to whom?

(4) How are institutions (e.g., teachers already in the system) impacted by the presence of beginning teachers?

(5) And finally, what is the need for an administrative response to the presence of new teachers?

First of all, and before responding to these issues, I would like to say that I'm somewhat uncomfortable with the use of the term "institutionalization" as a label to describe the process of becoming a teacher, although I am comfortable with the way in which the R&D Center has defined the term for this conference. From the questions that were presented to me, I think it is quite clear that the R&D Center's use of the term includes an interest in understanding how situational constraints and individuals' purposes interact in the making of teachers. I think, however, that the more commonly accepted usage of it connotes an overemphasis on situational constraint (how institutions shape the actions of individuals) and does not place enough emphasis of understanding the ways in which individuals impact institutions. Hanson and Herrington (1976) in their book, From College to Classroom: The Probationary Year, drawing upon the work of Peter Berger and Thomas Luckman, present a very accurate summary of what is most commonly connoted by the term "institutionalization":

> Any human activity that has been institutionalized has been subsumed under social control. The more conduct is institutionalized the more predictable and controlled it becomes. When two persons interact within an institution, the process ends with "this is how things are done," things attain firmness in consciousness; become objectivated activity. (p. 80)

I would prefer to use the more common term of "socialization" to refer to the process of becoming a teacher because this term more readily communicates an interest in understanding the continual interplay between individual choice and situational constraint which I feel research has shown is involved in the movement of persons into any occupation. Despite the fact that historically, studies of teacher socialization have emphasized how institutions change teachers and, as Colin Lacey (1977) states, portray the teacher as a relatively passive entity always giving way to socializing forces, "socialization," as it has been defined by seminal theorists in the field such as Hughes (1958), Merton, Reader, and Kendall (1957), and Parsons (1962), clearly accounts for individuals as both recipients and creators of values.

Merton, et al. (1957) in their study of socialization into medicine refers to the selective acquisition of values, attitudes and skills. Responding to Dennis Wrong's well-known critique of an "over-socialized" conception of socialization Parsons (1962, p. 79) states, "Of course human behavior is not determined by society as against the individual." Today, in studies of both childhood and adult socialization the bidirectional nature of the socialization process is widely accepted by advocates of various theoretical persuasions. The term "institutionalization" connotes an overemphasis on the plasticity of individuals in the face of institutional pressure, does not make the internalization of institutional norms problematic, and connotes a consensus view of institutions which minimizes attention to the potential influence of conflicting institutional pressures on organizational members.

Since I didn't get the impression that the R&D Center is at all interested in pursuing this sort of "oversocialized" view of the process of becoming a teacher, I would suggest that the term institutionalization be discarded. If you are interested, as you say, in understanding some of the ways that beginning teachers resist pressures to conform to organizational norms and ways in which they change institutional regularities, why not use language that is historically more consistent with your expressed interests? In a little while, I plan to discuss some of the ways in which I feel the rubric of socialization offers much potential for exploring some of the more subtle processes associated with becoming a teacher.

As I share my thoughts with you in a few minutes about what research seems to say about the socialization of beginning teachers, I will refer on several occasions to a study of four first-year teachers which Bob Tabachnick and I are just now completing at the Wisconsin R&D Center. More detailed information about this study is presented in Tabachnick, Zeichner, Densmore, Adler, and Egan (Note 1); Tabachnick, Zeichner, and Hudack (Note 2); and, Zeichner and Tabachnick (Note 3). I would like to spend just a few minutes now describing the nature of this study so that when I refer to some of our findings later on, you will have at least some understanding of the research context from which our conclusions were drawn.

We began in the spring of 1981 by studying the impact of the elementary student teaching experience at one large state university on the development of teaching perspectives by 13 student teachers whose selection gave us a representative sample, from this particular program, of teaching ideologies, classroom contexts, school organizational structures, grade levels and school and community demographic characteristics. *Teaching perspective* was defined according to Becker, Geer, Hughes, and Strauss (1961) as "a coordinated set of ideas and actions a person uses in dealing with some problematic situation" (p. 34). According to this definition, perspectives differ from attitudes since they include actions and not merely dispositions to act. Also, perspectives are defined in relation to specific classroom situations and do not necessarily represent generalized beliefs or ideologies. During this first phase of our work, we sought to identify the perspectives of the 13 student teachers in relation to four specific domains (knowledge and curriculum, the teacher's role, teacher-pupil relationships, and student diversity) and to identify any changes which took place in the perspectives of the 13 students during the course of the 15-week semester. We also sought to identify the various individual and institutional factors that were related to the development of perspectives toward teaching. During this semester we interviewed each student teacher five times and observed them while teaching three times, interviewed their cooperating teachers and university supervisors, examined journals kept by the student, and examined transcripts of their weekly student teaching seminars.

During the 1981-82 school year, we followed four of the original group of 13 individuals into their first year of teaching and asked two questions related to the general theme of teacher development: (1) *How were the teaching perspectives evidenced at the end of student teaching strengthened or* modified?--here we wanted to describe the continuities and discontinuities between the socializing conditions of teacher education and those of the workplace during the first year, (2) Who and what influenced the development of teacher perspectives during the first year?--here we were interested in identifying the personal characteristics of the beginning teachers and the characteristics of the institutions in which they worked that appeared to encourage resistance to or compliance with particular institutional pressures regarding teaching. To what extent did these teachers adapt to the existing regularities in their schools and under what conditions; from whom did they learn about these existing regularities and how; and how did the institution attempt to monitor and elicit compliance with particular institutional norms? Between August, 1981 and May, 1982, we spent three one-week periods in each of the four schools. We observed and interviewed each of the four teachers, interviewed their principals and colleagues and focused particular attention on six pupils in each classroom who were selected to represent the range of student diversity in each setting.

The four teachers worked in a variety of settings: (1) in urban, rural and suburban schools; (2) in schools that served very different kinds of communities (e.g., one school served mainly children of upper middle-class professionals; while another served families where the majority of the parents had recently been laid-off from a local factory). Three teachers worked in self-contained "eggcrate" settings with minimal departmentalization, while the fourth teacher worked in an architecturally open school with total departmentalization within teaching teams. Three were the only first-year teachers in their respective buildings, while one teacher had ready access to several other beginners. Two were the only teachers at their respective grade levels, while two teachers worked with other teachers who taught the same grade or, in one case, the same pupils. All of the teachers worked in settings very different than those experienced as student teachers and left the university with very similar teaching perspectives according to our original typology. (See Tabachnick, et al., Note 1.)

While we have only just completed preliminary analyses of the data from this study, we have produced detailed case studies describing the journeys of each of the four teachers from the beginning of student teaching to the end of the first year. I feel that some of what we have discovered about the development of the four teachers illuminates some of the individual and institutional influences on the development of beginning teachers. Our findings both confirm and disconfirm what others have told us from previous studies, but generally support the view expressed by Kevin Ryan (1970) and Dick Tisher (Note 4) that beginning teacher socialization is highly context specific, dependent in each instance on the unique interaction of people who possess varying levels of skills and capabilities and unique individual histories with differing school contexts. Despite recent statements from the UCLA study of schooling regarding the consistency, persistency, and mediocrity of school and classroom characteristics (Sirotnik, 1983), we found there to be very significant differences in the classrooms and workplaces of the four teachers and in the responses of the four teachers to the induction year. I will refer to some of our findings as well as to several existing studies shortly.

In responding to the specific questions posed to me today, I will address four broad areas:

(1) First, I will attempt to examine the question of who and what appears to influence the socialization of beginning teachers. I will try to identify some of the individuals and institutional factors which research has

suggested influence beginning teachers' acquisition or lack of acquisition of existing institutional regularities, and to identify some of the factors which seem to be related to how particular socializing agents and mechanisms influence beginning teachers. I will also present some general conclusions related to the question of socialization.

(2) Secondly, in responding to the question, "In what ways do beginning teachers impact the system?", I will focus on the following questions: To what degree do beginning teachers appear to adopt the cultures and traditions of their workplaces? To what extent do beginning teachers abandon perspectives, attitudes and values brought to the first year and under what conditions? To what extent do beginning teachers cling to perspectives even under institutional pressures to change? To what extent do beginning teachers comply only strategically with institutional regularities and even redefine institutional norms? Is there always the "reality shock" that so many researchers and beginning teachers have suggested, or is there more stability between student teaching and the first year as others have suggested?

(3) Third, I will address the question of generalization in relation to studies of beginning teacher socialization. Given my own view of the highly context specific nature of beginning teacher socialization and of the need for detailed case studies of the development of individual beginning teachers in specific situations, what can and should we aim for in being able to generalize beyond individual case studies such as those completed at Ohio State and Wisconsin? Must we settle for the "naturalistic generalizations" (or generalization by analogy) advocated by Bob Stake (1978); should we seek, as Glaser and Strauss (1967) suggest, to aim for lawlike empirical relationships that are tested and verified after greater understanding is

developed from case studies; or are there some other alternatives we should consider?

(4) Finally, I plan to briefly speak to the question of the need for an administrative response to the presence of beginning teachers. What evidence is there that we need to respond to beginning teachers in ways other than we are now responding, and what evidence is there regarding the influence of particular induction practices?

Who and What Influences the Socialization of Beginning Teachers

John Johnston and Kevin Ryan (1983), in their recent analysis of research on the beginning teacher, conclude, "Knowledge about the beginning teacher and the process of learning to teach consists largely of intuition, personal wisdom, advice and recollections. It is based on a limited foundation of thoughtful research and scholarship" (p. 138). Fred McDonald (1980) in the recent Educational Testing Service study of the induction of beginning teachers concludes that "very little is known about the actual dynamics of this transition period in terms of the details of what it is like and how teachers go through it" (p. 42). In my own view, there is clearly a lack of consensus in the literature which does exist, with regard to the potency and influence of various socializing agents and mechanisms. Studies exist which emphasize the socializing role of more experienced colleagues (Eddy, 1969; Newberry, 1977), pupils (Haller, 1967), sanctioning colleagues, such as principals and central office personnel (Edgar & Warren, 1969), the ecological characteristics of classrooms (Doyle, 1977), and the structural characteristics of schools and the teacher's work (Dreeben, 1973; Gitlin, 1983). Evidence also exists that beginning teachers learn how to teach during their first year largely alone, through trial and error and in the isolation of their own classrooms (Lortie, 1966), and that they frequently draw upon models of teaching which were internalized during pupilhood (Lortie, 1975), and on their own human tendencies to teach others (Stephens, 1967).

Significantly, for every study that demonstrates the importance of a particular role group or institutional factor in the socialization of beginning teachers, evidence also exists which modifies general conclusions under certain conditions. Lortie (1975) states in his examination of the "riddle of teacher socialization" that the socialization of teachers is undoubtedly a complex process not readily captured by a single-factor frame of reference. He calls for studies which assess the relative contribution of several agents or mechanisms under particular conditions. I want to now spend a little time discussing what research seems to say about the influence of particular people and institutional characteristics on beginning teachers, given the caveat that there is a great deal that we do not know at the present time.

Constant Guides and Guardians: The Role of Experienced Teachers

Elizabeth Eddy (1969), in Becoming a Teacher, states that even in the isolation of their own "eggcrate classrooms" new teachers entering the school soon learn that they are not alone, but part of a group of colleagues who attempt to guide and help them in many ways. She feels that experienced colleagues are a constant source of help and guidance and that, as a consequence of these mainly informal learning, "the new recruits develop a world-view of educational categories and processes consistent with that of other teachers in the school" (p. 102). "Like new workers in all work settings, they are largely dependent on their more experienced colleagues to teach them the procedures for coping with the demands made upon them by their supervisors and subordinates...for the provision of educational tools, for establishing work routines, for preparing classroom displays and for preparing plans and filling out student records" (p. 106).

In a similar vein, Willard Waller (1932) in The Sociology of Teaching, concludes: "The significant people for a school teacher are other teachers and by comparison with good standing in that fraternity, the good opinion of students is a small thing and of little price. A landmark in one's assimilation into the profession is that moment when he decides that only teachers are important" (p. 398).

According to Eddy (1969), beginning teachers' reports reveal that their relationships with older, more experienced colleagues are highly significant. There is some research which supports this view including a study in which Carl Grant and I surveyed 72 first-year teachers in various parts of the United States, regarding the nature and source of the support which they received (Grant & Zeichner, 1981). Two-thirds of the 72 first-year teachers we surveyed cited informal and relatively unstructured support from experienced colleagues (usually at the same grade level) as their primary source of support. However, despite the evidence that experienced colleagues help beginning teachers in various ways in their transition from college to classroom (Applegate, Flora, Johnston, Lasley, Mager, Newman, & Ryan, (1977)) provide an interesting typology for understanding the varied nature of this support), there is also evidence that beginning teachers do not receive much help and advice. For example, Fred McDonald (1980, p. 71) states in the recent ETS study: "If one conclusion is apparent in this study, it is that beginning teachers solve their own problems very much by themselves." Also, a doctoral dissertation completed by Isaacson (1981), at Oregon, concludes that beginning teachers rarely received help from experienced colleagues (or school administrators) even when formal structures existed to supply such help.

Apart from the question of "help," either sought after or received, is the question of influence. In what ways do experienced teachers appear to influence the beliefs and practices of first-year teachers even when there may be a lack of contact (formal or informal)? Here, we have several studies like the one conducted by Wayne Hoy (1968) on shifts in the pupil control ideologies of first-year teachers, which suggest that the norms within the teacher peer group exert a powerful influence on shaping the attitudes and ideologies of first-year teachers. We also have studies such as McArthur's (1978) replication of Hoy's study, in Australia, which suggest that the influence of the teacher culture is mediated by certain characteristics of first-year teachers (e.g., change between student teaching and the end of the first year in commitment to teaching as a career).

One of the most interesting and, I think, important studies which has been conducted to date with the goal of understanding the influence of experienced teachers is a study completed by Janet Newberry (1977), in Canada. Newberry concluded that for the 23 teachers in her study, experienced colleagues played a significant socializing role in terms of the development of expectations for pupil achievement. She also described the enormous barrier which existed between beginners and experienced teachers in her study, when it came to the giving or asking of help with the development of teaching techniques. In this area, beginners generally hesitated to seek help from their more experienced colleagues because they were fearful of being viewed as incompetent and the experienced teachers generally hesitated and even refused to work with beginning teachers because they did not want to interfere. Only six of the 23 first-year teachers in this study developed significant professional relationships with experienced teachers and then only under two conditions: (1) the teachers taught at the same grade level; (2) the teachers taught like the beginners wanted to teach. Most of the influence of these experienced teachers on the neophytes was informal and much of what beginners learned was, as Newberry describes, "learned without asking:"

> Focused on conversation between beginning and experienced teachers on teaching practices was minimal and the opportunity to observe other teachers at work was nonexistent. The beginning teachers' limited knowledge of other teachers' practices was based on information gained indirectly. They acquired this information informally as they watched and interacted with teachers outside actual classroom teaching situations. They heard comments in the staffroom and looked at materials brought in by experienced teachers. They also heard comments and saw materials around the duplicating machine. Looking through open classroom doors or visiting other teachers' classrooms before or after school also informed beginners about the kind of work in which other teachers were currently engaged and the materials and techniques they used. (p. 14)

I think Newberry's research is fascinating and gives us many leads for future investigations of the influence of experienced teachers. In our own research at the University of Wisconsin, two of the four teachers did develop close professional relationships with colleagues at the same grade level and who taught in ways consistent with the beginners' perspectives. Another teacher who was the only teacher at her grade level and who was totally isolated in terms of preferred teaching styles did not develop close professional relationships with any teachers in her school. Despite frequent social interactions with teachers, this teacher was left to fail on her own. The fourth teacher, who was the only one at her grade level and who was relatively isolated in terms of preferred teaching styles, did develop a close alliance with another teacher at a different grade level who, despite the differences in their teaching styles, was similar in age to the beginner and was willing to listen to her and be supportive. For those who managed to develop close professional relationships with their more experienced colleagues, the influence was different in quality and direction in each case. There is no question that experienced teachers are one of the key factors that need to be examined further in relation to the socialization of beginning teachers. Before moving on, I would like to suggest a few things that we've learned as a result of our own research that I think should be considered in future studies:

(1) As studies by Carew and Lightfoot (1979) and Metz (1978) have suggested, it is at least sometimes the case that various and often conflicting school subcultures and teaching styles exist within a single school. The view expressed by Hoy (1968), that there is a single and homogeneous school culture into which neophytes are socialized, is not always correct. We found that this consensus view of the school culture was not accurate in three of our four schools and that we had to attempt to identify the various teacher subcultures within a school and the often conflicting attempts to influence beginners on the part of experienced colleagues. We also found that we had to distinguish between formal and informal school cultures in two of the four schools.

(2) It cannot always be assumed when looking for the socializing influence of experienced colleagues that there is an initial discrepancy between beginners and veterans in terms of teaching perspectives as has often been assumed. The "loss of idealism" (or "curve of disenchantment") that is frequently referred to in the literature was not a significant factor in two of our four cases. In one case, there was a very strong initial agreement between the beginner and her colleagues and there was not a loss of idealism because the idealism was not there to begin with. In one other case, there initially was a strong overlap between the "progressive" perspectives of several experienced teachers and the beginner which the first-year teacher later transcended in subtle ways.

(3) Finally, we found that the architectural design of the school affects the ability of experienced teachers to influence beginners. As one would expect, the strength of colleagues' influence appeared to be greater in open schools where no walls separated classrooms than in the conventional "eggcrate" building. The beginning teacher study conducted by Hanson and Herrington (1976), in England, also found this to be true. Also, the coordination and planning required in a teamed and departmentalized setting typically provides more opportunities for teachers to interact about their work and, hence, more opportunities for experienced colleagues to directly influence neophytes.

The Influence of Persons with Evaluative Power

Kevin Ryan (1979) expresses the commonly accepted view regarding the assistance provided to beginning teachers by persons with evaluative power over them when he states: "Beginning teachers get very little help from their supervisors, principals and department chairpersons." Although this position has been frequently supported by statements of others, including many beginning teachers, there are instances in the literature where beginning teachers do report receiving help from "supervisors," help of various sorts and help with varying impact. For example, in The Ohio State First-Year Teacher Study (Applegate, et al., 1977) several instances are cited where support was given to beginning teachers by principals and was evaluated as being either helpful or unhelpful. In our own studies at the University of Wisconsin (Grant & Zeichner, 1981; Tabachnick, et al., Note 2) in Issacson's (1981) study, and in the work of Paul Burden (Note 5) at Kansas State, there is very little evidence of direct support being provided to beginners by "supervisors" over and above the ritual of new teacher orientation sessions held at the beginning of the year.

There appears to be a general consensus in the literature that little is being done by administrators in a formal way (except in the isolated instances where experimental induction programs have been implemented or in a few school districts) to support beginning teachers in a sustained way over and above that staff development support provided to all teachers (Howey, Yarger, & Joyce, 1976). Despite the fact that we probably will hear examples in this conference that will contradict this view, I would argue that these "exemplary efforts" are isolated examples and that for most beginning teachers the observation made by Howsam, Corrigan, Denemark, and Nash (1976) in *Educating a Profession* is as probably true today as it was seven years ago: "Many new teachers function in a professional desert, abandoned by the institutions where they received their preservice education and neglected by over burdened supervisory personnel" (p. 101).

What about the question of the influence of persons with evaluative power apart from any direct support or advice? Edgar and Warren (1969), in a widely cited study, argue that "colleagues *per se* and the contextual effects of the workplace are less important to organizational neophytes than are the attitudes of significant evaluators" (p. 389)--those having power over the new teacher in terms of their ability to apply organizational sanctions. Their study indicates that under certain conditions beginning teachers' attitudes toward autonomy in the teacher role (in relation to specific areas such as parents, colleagues and curriculum) shift toward the attitudes possessed by sanctioning colleagues after six months of the first year. The ability of the evaluators to affect beginning teachers' attitudes was mediated by two factors: (1) the degree of affect present in the supervisory relationship; (2) the resources possessed by individual beginning teachers.

In our own study at the University of Wisconsin, although none of the principals provided a significant degree of direct support and help, the beginning teachers were influenced by principals in many ways. For example, one teacher openly and continually challenged her principal's directives regarding acceptable pupil behavior in the hallways and lunchroom and directives concerning the grading of pupils' work. She never did adopt the values expressed by her principal and was able to establish her own style of teaching, often violating the principal's wishes, because of her ability to mobilize parental and pupil support, because of her close alliance with one other teacher and because her pupils scored the highest in the district at that particular grade level in the Iowa tests. Another teacher, in part because of her fear of her principal, made efforts to adopt a teaching style which was incompatible with her own views, and after she was unsuccessful in doing so she continued, although also unsuccessfully, to try to establish her own preferred style. In another case, the influence of the principal was exerted not through any direct interaction with the principal and only minimally through bureaucratic rules. The influence of the principal in this case was exerted through a series of technical controls which were embedded into the form of the teacher's work. It is this matter of technical control and the influence of other structural characteristics of schools on the development of beginning teachers that I would now like to briefly address.

Institutional Characteristics of Schools

Gary Fenstermacher (Note 6) stated at a conference held here a few years ago that teachers' experiences with the institutional characteristics of schools are the most potent determinants of their intentions and that these intentions (motives, plans, deliberative choices) are significant determiners of teachers' performances in the classroom. He sees the institutional characteristics of schools as including form of organization, reward structure and ways of employing technical language and symbols. Fenstermacher hypothesizes further that the institutional characteristics of schooling experienced during induction are more powerful determinants than experiences gained during other spans of time.

In a similar vein, Dreeben (1970, 1973) has written extensively about how certain organizational properties of schools have implications for the character of teachers' work. Dreeben's thesis is that certain structural properties of schools such as their internal spatial arrangement (e.g., eggcrate vs. open-plan), modes of affiliation (e.g., hired vs. conscripted), and authority relations with schools (e.g., between teachers and pupils; teachers and principals) shape the character of teachers' work activities and that the nature of teachers' work can be construed in terms of adaptive responses to these problems.

There are many others of various theoretical persuasions (e.g., Harris, 1982: Meyer & Rowan, 1978; Hoy, Note 7) who have described how particular institutional properties of schools affect teachers' actions. Today I would like to focus briefly on just one aspect of school structure--the way in which institutional control is exerted over organizational members, and on how thinking about this issue can be helpful in understanding the experience of first-year teachers. All institutions, and schools are no exception, employ mechanisms of control to exact greater productivity from workers and to try to ensure that organizational members follow accepted procedures within an organization. Richard Edwards (1979), a political economist, in Contested Terrain: The Transformation of the Workplace in the 20th Century, identifies three different forms of organizational control.

First, with personal or direct control, superordinates (which in the case of the school would be the principal) personally supervise the activities of workers and through close monitoring of workers' actions ensure that workers comply with organizational norms. Secondly, with bureaucratic control, control is embedded into the social structure and social relations of the workplace and is enforced through impersonal bureaucratic rules and hierarchial social relations. Sanctions and rewards under bureaucratic control are dictated by officially approved policies to which workers, in particular role groups, are held responsible. Finally, with technical control, an organization's control over its members (direction of work tasks, evaluation of work done, and rewarding and disciplining of workers) is embedded into the physical structure of the labor process and jobs are designed in such a way as to minimize the need for personal supervision by administrators and to minimize the need to rely on workers' compliance with impersonal bureaucratic rules.

This framework for examining various forms of organizational control was very helpful to us in our own study in illuminating how the first-year teachers learned what was expected of them, how desired behaviors were reinforced, and how organizational sanctions were applied. Generally, we found that there was very little direct and close supervision of the first-year teachers by their principals. Although, all of the principals had very clear expectations for what the teachers were supposed to teach and for how they should manage their classrooms, with possibly one exception, there was very little effort on part of principals to attempt to personally ensure teacher compliance.

On the other hand, as one would expect, there were numerous bureaucractic rules in each case which attempted to dictate to the teachers how and what to teach, procedures for managing pupil behavior in and out of the classroom and the general activities of teachers and pupils (e.g., rules for when teachers could leave at the end of the day).

Here we found that bureaucratic rules and regulations (e.g., in curriculum guides, teacher handbooks) gave the beginning teachers varying degrees of information about what was expected of them and of the limits beyond which organizational sanctions would be applied. We did find, however, consistent with Weick's (1976) notion of schools as "loosely coupled systems," that the first-year teachers were frequently able to ignore or even to openly violate bureaucratic rules when they decided to do so. For example, despite a policy in one school that required teachers to grade pupils so many times during each report period according to a standardized grading scale, one first-year teacher openly violated this rule by taking pupil "effort" into account when grading her pupils. This teacher raised the scores of her pupils when she thought they had put their best effort into their work. Another teacher violated school rules and procedures more subtly; so subtly, in fact, that it would be very hard to know what she was doing unless one spent an extended period of time in her classroom. Only one of the four teachers willingly complied with school rules and regulations on a regular basis and adopted a "bureaucratic perspective" toward her work. Despite the fact that bureaucratic control was able to penetrate the classrooms of the four teachers, in three of the four cases teachers were able to employ independent judgment and personal discretion which had the effect of minimizing the impact of bureaucratic rules.

One of the most interesting aspects of our findings is the important role that technical control played in the experience of one of the teachers. In this case, technical control which was embedded into the form of the school curriculum had a great deal to do with explaining how this teacher learned what was expected of her (e.g., how and what to teach), and with understanding how her work was monitored and evaluated. In this particular school, curricular objectives, content, materials, and tests were largely predetermined before the first-year teacher came into the setting. The expectations for this teacher was relatively certain in comparison with the other teachers and her activities were heavily influenced by the performance-based curriculum which she was expected to closely follow. The form of control in this situation was very different from other situations where teachers were given broad curricular goals, access to a variety of materials and where there were more opportunities for teachers to exercise independent judgment and initiative in their work. In these other situations, there was less certainty with regard to institutional expectations although the teachers reacted to this uncertainty in different ways. Michael Apple (1983) and others such as Andrew Gitlin (1983) and Arthur Wise (1979) have recently argued and have provided some empirical support for the view that technical control is a significant aspect of the way in which teachers are socialized into their work and of how institutional norms are maintained over time. Our research confirms their more general position that schools exert varying types of organizational controls over teachers' work and that it is important to consider how *different* forms of organizational control contribute to communicating institutional expectations to teachers, and provide various mechanisms for monitoring and evaluating teachers' activities. In my opinion, the notion of technical control is an issue that warrants further investigation in relation to the lives of beginning teachers; and is an issue that should be taken into account in the planning of future induction studies.

The Influence of Pupils as Socializing Agents

Lortie (1975) argues that the rewards of teaching come largely from one's pupils. Jackson (1968) in Life in Classrooms, tells us that teachers most often look to their pupils for validation of their efforts rather than to colleagues or administrators. How do teachers tell if they are doing a good job? How are teaching behaviors reinforced? There is substantial evidence that pupils' responses reinforce the teachers' behaviors which evoked them and that pupils play an important role in shaping the way teachers behave.

This position on their significant role in occupational socialization can be supported both on logical grounds and by empirical research. Haller (1967) and Doyle (1979) argue that the important role of pupils in teacher socialization is understandable given the typical isolation of teachers from their colleagues and supervisors and given the transitory and invisible nature of the learning process.

> This invisibility of the learning process has important consequences for the teacher, for it means that there is no simple objective and immediate method by which he can unequivocally assess his performance. Instead, most teachers rely on observations of their students, often times watching for highly transitory reactions in pupil behavior which they believe indicates that learning has occurred. (Haller, 1967, p. 318)

These and other logical explanations for the importance of pupils in the occupational socialization of teachers are consistent with several bidirectional models of childhood socialization (Dreitzel, 1973) and are supported by a substantial number of empirical studies on classroom influence (e.g., Brophy & Good, 1974; Fiedler, 1975; Noble & Nolan, 1976). According to Doyle (1979), "the influence of students ranges from the general teaching methods and patterns of language teachers use in classrooms to the type and frequency of teacher questions and feedback given to individual students"

(p. 139). Furthermore, the individual characteristics of both teachers and students seems to affect the ways in which pupils influence teachers' behaviors. For example, according to Doyle (1979) research has shown that "high achieving students appear to have the greatest amount of influence on teachers, especially when the teacher is high on measures of cognitive complexity" (p. 139). There seems to be little question that classroom influence is reciprocal in nature and that pupils' reactions to teachers need to be closely examined in any attempts to understand how teachers learn their roles and develop particular patterns of behavior over time.

Although there is a substantial body of research on this question, there have been, to my knowledge, very few attempts to closely examine pupil influence specifically in relation to beginning teachers. Although both the Ohio State First-Year Teacher Study (Applegate, et al., 1977) and our own work, at Wisconsin, seem to confirm what research seems to be telling us for teachers generally, I feel that we currently have very little understanding of how specific beginning teachers are affected by the reactions of their pupils in different kinds of situations and how the personal characteristics of beginning teachers and pupils influence the nature of this impact.

In our own study at Wisconsin, despite the unique interactions of individual characteristics and institutional factors which made the first year of teaching somewhat different for each teacher, we were continually impressed with the very crucial role played by pupils in strengthening or modifying the teaching perspectives that were brought to the first year. In also seemed to us that grade level together with the degree of homogeneity in the school culture (and the teacher's relation to that culture) affected the way in which pupils influenced the four teachers, although we do not have a wide enough sample of grade levels for me to be confident in these impressions.

Specifically, it seemed that in higher grades where pupils had experienced a very similar style of teaching for many years, it was generally more difficult for the teacher to establish a style of teaching to which the pupils were unaccustomed.

Let me share with you a statement made by one of the beginning teachers in our study to give you an idea of what I mean. This statement comes from an 8th grade teacher in a school with a very strong and homogeneous teacher culture very different from her own preferred style of teaching; a style which she very skillfully demonstrated as a student teacher:

> These 7th and 8th graders are already into this routine, and they're not used to doing things on their own. I've tried to have them do some kind of reference skills on their own, but they're totally lost. They can't handle it. I did that for two months and I'd help them, but it didn't work at all. I figured out that I'm just gonna do it more structured and pass out worksheets and do it in a large group, together. It's really hard for them to do it if they're not used to it. At ___________, they were doing it at the 5th grade and picking it up fast. They were probably doing it from the first grade...Here, if you're having a bad day, the best thing to do is to read out of the book...They will just line up like little soldiers and get their books out and read. That is not the best way to do it, but that's what they are conditioned into doing. (Interview with Rachel)

Ecological Characteristics of Classrooms

Walter Doyle (1979) after demonstrating through a review of research that pupils are significant socializing agents, goes on to argue that "student effects are just one facet of the larger question of the effects of classrooms on teachers. There are other dimensions of the classroom environment that influence teacher behavior" (p. 139). Doyle, Willis Copeland (1980), and others have emphasized the role of the ecology of the classroom in shaping teachers' actions. Doyle and Ponder (1975) define the ecological system of the classroom as "that network of interconnected processes and events which impinges upon behavior in the teaching environment" (p. 183). Doyle (1977) has identified five distinctive features of classrooms that he claims are crucial in shaping the work of teachers: multi-dimensionality, simultaneity, immediacy, unpredictability, and history. Others, such as Dreeben (1973), Jackson (1968), Sharp and Green (1975), and Dale (1977), all discuss various ecological conditions of the classroom and how they affect teachers' actions (e.g., teacher-pupil ratio). According to Doyle (1979),

> Classrooms are crowded with people, activity and interruptions; many events take place at the same time and there is little time for a teacher to reflect before acting or even anticipate the course of events. In addition, classroom groups meet regularly over an extended period of time so that rules evolve for the behavior of teachers and students and decisions at one point have consequences for action in the future...If teachers met their students one-at-a-time and at the students' initiative, the setting for teaching would contain few of these elements. (p. 139)

According to this view of classrooms as ecological environments, learning to teach involves "learning the texture of the classroom and the set of behaviors congruent with the environmental demands of that setting" (Doyle, 1977, p. 51). It is felt that the environmental demands posed by current classroom arrangements establish limits on the range of teacher behaviors that can become successful in particular settings and that "successful" teachers must learn a set of adaptive behaviors that are appropriate to particular situations.

> The study of classroom effects on teachers raises questions about the extent to which the things teachers do in classrooms and how they think about their work are associated with specific classroom demands rather than with the personal competence and desires of teachers or the quality of their preparation. (Doyle, 1979, p. 142)

This viewpoint also raises questions about the potency of the influence exerted by particular people such as colleagues and administrators and of bureaucratic rules in the socialization of beginning teachers. While colleagues and principals may be able to help the neophyte learn particular skills and strategies for coping with particular environmental demands and while bureaucratic rules clearly contribute to the establishment of particular classroom ecologies, the work of Doyle and others suggests that we need to focus primarily on the particular kinds of demands made upon teachers in different kinds of classroom settings.

Although the work of Sirotnik (1983) at UCLA has questioned the variety of classroom ecologies which in fact exist and while others have attempted to explain the persistency of the recitation method by typifying classrooms as very alike (Hoetker & Ahlbrand, 1969), I would argue (while agreeing with Doyle's position) that not all classrooms exert the same sort of demands on teachers and that not all teachers respond to similar demands in the same way. I think we have very strong evidence in our study conducted at Wisconsin that a variety of environmental demands were made on the four teachers. While Doyle's five conditions existed in each of the classrooms, factors such as the reactions of the pupils (e.g., "conditioned" to do independent work vs. "conditioned" to passive student roles) and the resources of the teachers (e.g., coping skills) reduced or intensified the degree of constraints posed by particular demands. A paper by Kathleen Egan (Note 8) examining the experience of three student teachers in one IGE middle school (which was a part of the first phase of our study) is a good example, in my view, of how teachers can and do respond to similar environmental demands in unique ways. In any case, the ecology of the classroom seems to be another important component in any study of the socialization of beginning teachers.

The Role of the University

Hanson and Herrington (1976) conclude in their study of probationary teachers in England:

> What teachers are doing is learned in school, and if in college there is some consideration of what teachers should be doing, it is not sustained. (p. 62)

The question of the role of the university in the socialization of beginning teachers, as I've argued in a recent paper (Zeichner & Tabachnick, 1981), is an area that I feel is not well understood. In this paper, Bob Tabachnick and I present three scenarios describing alternate explanations found in the literature for how preservice preparation influences the development of teachers. The position expressed by Hanson and Herrington is probably the most commonly accepted viewpoint today, but it is not the only one. For example, Mardle and Walker (1980) in another British study conclude:

> Teachers do not become resocialized during their course of training nor in the reality of the classroom since in essence this is a reality which they never actually left. (p. 103)

Before moving on to consideration of this view which emphasizes the significance of anticipatory socialization in the development of teachers (i.e., those experiences predating preservice training), I would like to make a few comments about the role of the university. First of all, there seems to be widespread agreement that beginning teachers have very little sustained professional contact with their university instructors once preservice training is completed. Despite the probable exceptions to this fact in states like Oklahoma and maybe a few others, there is a great deal of empirical support (e.g., Grant & Zeichner, 1981) for the charge made in Educating a Profession (Howsam, et al., 1976) that first-year teachers are "abandoned" by the university.

However, here as before, the question of influence needs to be considered apart from the existence of any direct contact. It is at least theoretically possible that beginning teachers continue to draw on what they learned at the university during their first year even when there are pressures exerted in opposing directions. In our study, we did find first-year teachers frequently reading notebooks from methods classes and frequently referring to particular instructors and cooperating teachers when asked about the source for particular events which were observed. Three of the four teachers continued throughout the first year to strive toward perfecting a style of teaching evidenced during student teaching and two teachers tenaciously clung to their initial perspectives in the face of powerful institutional pressures to change. While it is possible that the perspectives evidenced during student teaching had very little to do with the role of the university, the evidence from Phase One of our study suggests otherwise.

Generally, I would continue to argue that the role of the university in beginning teacher socialization is not well understood. One reason for this is that very few longitudinal studies have been conducted which have traced the development of teachers from the time that they enter a preservice program to the end of their first year. We studied teachers from the beginning of their student teaching, but I do not feel this was adequate for understanding the role of preservice education. I feel that more longitudinal studies are needed to get a better grasp of this issue, although the kinds of longitudinal studies that I would like to see are probably not practically feasible. I would agree, however, with Dennis Wrong's (1976) statement that cross-sectional studies, the kinds of studies that have dominated the teacher socialization literature are inadequate for getting at the role of pre-first-year influences in the development of first-year teachers.

> A cross-sectional, situational view of interaction, important though it is, remains insufficient. We need also a longitudinal, biographical perspective to account for motivational constraints that cannot be understood by even the most subtle scrutiny of the interaction situation alone. (p. 66-67)

One final comment on this matter. The one exception to the lack of contact between first-year teachers and their university mentors seems to be the interactions of beginning teachers with we who attempt to study them. A few weeks ago, while rereading the Ohio State First-Year Teacher Study, I was reminded of the tremendous impression that field-study research about beginning teachers seems to have on those being studied. Let me share with you a quote from one of the teachers in the Ohio State Study:

> I got so involved in the FYT Study coming out of OSU. I'm working closely with one of the researchers. We get together regularly. He observes my class and sees me teaching. He know my students. He knows what problems I've had and I'm now having. I'm pretty honest with him. I've told him things that I wouldn't tell anyone else in the school. Because he knows what my class is like, he can understand what I'm talking about. I've found him very helpful. When I need help with grades, he's able to make some good suggestions. He's always encouraging for me. If I feel down, I can tell him and talk it out. I talk and he talks. We spend a lot of time. I don't know who I'd go to without him. (p. 57)

This sort of reaction to being studied as a first-year teacher, while not unanimously experienced, seems to be a fairly common occurrence. Generally, the teachers in our study seemed to react positively to our visits and saw our contacts as a form of therapeutic support. This influence raises some problems for research on beginning teachers, particularly the problem of "reactivity." Specifically, while attempting to understand the way in which teachers proceed through their first year, we may, as a result of our attempts to understand, alter the very experience that we are trying to understand. For example, when in our study we attempted to understand how clearly student teachers and teachers were able to articulate their perspectives on teaching, it is probable that our numerous hours of interviews with the teachers affected how clearly the teachers understood their particular points of view. It seems that a necessary part of research on induction is to attempt to assess how we as researchers affect the teachers we study and what our influence means in understanding the socializing role of other people and factors. The Ohio State Study is the only study of which I am aware that has made systematic efforts to address this problem of reactivity.

The Influence of Persons in Lateral Roles and Other "Non-Professional" Factors

Olesen and Whittaker (1968), in the Silent Dialogue, define lateral roles as those roles in which an organizational member is involved that are not directly a part of the formal socialization process (e.g., spouse, friend, parent). They then provide evidence in the case of student nurses that lateral roles directly influence the formal socialization process largely by creating conflicts in time and interests. In my view, this is one of the most unexplored areas with regard to the socialization of beginning teachers. The Ohio State First-Year Teacher Study cites instances of both supportive and nonsupportive influence from spouses and parents. Our own research indicates, in one case, that a roommate (an experienced teacher who taught at the same grade level in another school) provided the support and advice that this teacher could not and would not receive from her colleagues. I am in complete agreement with John Johnston and Kevin Ryan's (1983) position that we cannot separate the personal and professional lives of beginning teachers in our attempts to understand the development of teachers. Clearly, this is an area which needs closer analysis and study.

The Personal Characteristics of Beginning Teachers and the Role of Anticipatory Socialization

Although the actions of beginning teachers are clearly more than simply expressions of the ideas they have in their heads and who they are as people, the personal characteristics and "life skills" that beginning teachers bring to their first year, which includes their unique biographical histories, are without a doubt important factors in determining the strength and quality of their socialization. Teachers do not simply react to all of the various people and forces around them, but act back on these forces, give shape to their roles and are active agents in their own socialization.

> The social processes involved in both the formation and maintenance of identity are determined by the social structure. Conversely, the identities produced by the interplay of organism, individual consciousness and social structure react upon the given social structure, maintaining it, modifying it, or even reshaping it. (Berger & Luckman, 1967, p. 173-174)

Fred McDonald (1980), in the ETS beginning teacher study, emphasizes the importance of "coping skills" that beginning teachers bring to their first jobs in helping or hindering their adaptation to the workplace.

> Many problems of teaching can be dealt with on the basis of skills that one uses in places and situations other than teaching. Maturity of point of view, independence, self-reliance, confidence in seeking information and help are broadly useful characteristics in life and certainly must have some effect on how teachers make the transition into teaching. (p. 175)

Also, the Sprinthall's (Sprinthall & Thies-Sprinthall, 1983) and others like Sharon Oja (1978), Bob McNergney and Carol Carrier (1981), and Carl Glickman (1981) have convincingly demonstrated that cognitive-developmental theories have much to contribute toward an understanding of how teachers react in their jobs and to life generally. Our own research, while we did not obtain any precise measures of teachers' locations within any particular cognitive-developmental framework or precise measures of any other personal characteristics, seems to confirm the view that who beginning teachers are as people, their upbringing, life skills, etc., greatly affects how they carry out their roles. For example, one teacher's fear of her principal (who was also a nun) was at least in part due to her strict Catholic upbringing. Another teacher's very highly developed interpersonal skills and political sensitivity, which were evidenced by her ability to mobilize parental support, had a lot to do with her being able to succeed with her preferred style of pedagogy in the face of very strong institutional pressures to change. Another teacher's lack of interpersonal skills and sensitivity to the political realities of schooling had a lot to do with her failure to establish her preferred pedagogy.

There is no question that future induction studies need to pay attention to how the personal characteristics of beginning teachers affect their induction into teaching. Attention to the influence of personal characteristics on teacher development is especially important given the evidence which suggests that much of what first-year teachers learn may be learned through trial and error in the isolation of their own classrooms (Lortie, 1966; McDonald, 1980). However, despite the recent attention given by cognitive-developmental psychologists to teacher development, this area remains largely unexplored in relation to beginning teachers and the induction period.

> Individual teachers are more or less autonomous in coping with problems. Some seem to be able to generate their own resources for help in such matters, others seem to be very dependent on being led to solutions. Some are more adaptive and flexible, others are more rigid...the literature on how such differences in personal characteristics affect initial induction into the profession is a very sparse literature indeed. (McDonald, 1980, p. 76)

Closely related to the issue of personal characteristics is the question of anticipatory socialization. There are many who argue that experiences predating formal training are more profoundly influential in the making of a teacher than the efficacy of preservice training or the socialization in the workplace. For example, John Goodlad (1982) has recently argued:

> Teachers teach as they were taught during their many years as students. Their professional preparation comes late in their own schooling and is tool little and too thin to separate them from what their experience has taught them that teaching is. This professional preparation and subsequent practice merely reinforce their own perceptions. Teachers fail to transcend the conventional wisdom of their own profession and continue to teach as they were taught. (p. 19-20)

Goodlad's view is very similar to what Lortie (1975) has called the "apprenticeship of observation" and to what Kevin Ryan (1970) has called "teacher watching." According to this view, teacher socialization occurs largely through the internalization of teaching models during the 16,000 hours or so, spent as a pupil in close contact with teachers. According to Lortie (1975), the activation of this latent culture in the workplace is a major influence in shaping subsequent conceptions of the teaching role and role performance. Formal training at the university is seen as having little effect in altering the cumulative effects of this anticipatory socialization. Lortie, in fact, even questions the use of the term socialization to describe entry into the teacher role. There is some empirical research which supports his thesis (e.g., Petty & Hogben, 1980; Mardle & Walker, 1980).

> The connotations of the term socialization seem somewhat askew when applied to this kind of induction, since they imply greater receptivity to a pre-existing culture than seems to prevail. Teachers are largely self-made, the internalization of common knowledge plays only a limited part in their movement to work responsibility. (Lortie, 1975, p. 80)

There are a few other variants of the position which emphasizes the importance of experiences predating formal training and work experience that I would like to mention. Wright and Tuska (1967, 1968), in a series of studies conducted from a psychoanalytic perspective, suggest that teacher behavior is affected to a considerable extent by the quality of their relationships with parents and teachers (during childhood). They also argue that at least some of beginning teachers' problems are a result of a failure to correct fantasy impressions about teaching. Finally, Stephens (1967) emphasizes the role of our human tendencies to teach others (e.g., to speak of what we know, to point to the moral) in explaining why teachers act as they do.

How Beginning Teachers are Socialized

At this point, I've tried to identify some of the individual and institutional factors which, in my view, research has suggested affect the quality and strength of beginning teacher socialization. In doing so, I've briefly touched on what research seems to say about the roles of experienced colleagues, significant evaluators, persons in lateral roles, nonprofessional experiences, university preparation, pupils, institutional characteristics of schools, ecological characteristics of classrooms, the personal characteristics of beginning teachers, anticipatory socialization and our own roles as researchers in influencing the lives of first-year teachers. Given that all of these factors as well as others which I did not mention (e.g., community expectations and the influence of parents) probably all influence beginning teachers' induction experiences to some degree, what do we know from research about how individuals become professional teachers--how and to what degree they learn about and adapt to institutional regularities; how desired behaviors are reinforced and how monitoring and evaluating are carried on?

In my view, a summary statement made in the Ohio State First-Year Teacher Study (Applegate, et al., 1977) accurately describes how all of these various factors come together in the socialization of beginning teachers. "What emerges from these interviews of beginning teachers is a strong sense of the uniqueness of each teacher's experience." Similarly, Kevin Ryan (1970), in Don't Smile Until Christmas, concludes that each beginner's experience is a unique product of the interaction of his own psyche and the milieu of his school. Finally, Dick Tisher (Note 4), in a recent American Educational Research Association address concluded, "the quality and effects of induction are highly context-specific." Thus, despite empirical evidence that beginning teachers have similar kinds of problems and experience similar kinds of concerns (Johnston & Ryan, 1983), and despite the trauma and frustration experienced by many beginning teachers and their widespread dissatisfaction with the support that they receive during the induction year (Lewis, 1979), it seems that beginning teachers (with varying levels of skills and personal resources) interact with school contexts (which differ in terms of the constraints and opportunities they present to beginners) in ways that make the process of becoming a teacher a "riddle" to be solved somewhat differently in each instance.

Our own research at Wisconsin confirms this view that beginning teacher socialization is highly context-specific and dependent in each case on unique combinations of the personal characteristics and resources of individual beginning teachers and the varying encouragements and constraints posed by the situations in which they work. It would be very difficult for me (especially with an N of only 4) to make blanket generalizations about the ways in which persons in particular roles (e.g., principals) and particular institutional factors (bureaucratic rules) affect the development of teachers. Where does this leave us? Is the answer to the question, "How are Beginning Teachers Socialized?", answered by my merely describing the journeys of Rachel, Beth, Hannah, and Sarah or by my handing you our four case studies or case studies from other investigations such as the one at Ohio State? Do we know anything more than the fact that each person and each situation is unique?

I strongly feel that it is possible and even necessary to go beyond each unique experience to develop generalizations which transcend the specific situations studied. A colleague of mine at Wisconsin, Gary Wehlage, has presented a very helpful approach for addressing the problem of generalizability and for fulfilling the common assumption in social science research that information gathered in one setting should be in some way transferable to situations and events yet to be studied.

Wehlage (1981) outlines the two most commonly articulated positions with regard to our ability to generalize from indepth field research. On the one hand, there is the view which has been expressed by Bob Stake (1978), Harry Wolcott (1973), and others, regarding the desirability and even necessity of naturalistic generalizations or generalization by analogy. According to Wehlage (1981):

> The implication of this view is that generalization is more like thinking by analogy than discovering lawlike empirical relationships. One is provided with concrete yet albeit surrogate-experience through the medium of a case study. The information presented does not contain general propositions to be tested, nor does it conclude with findings that appear as lawful generalizations. Instead, one is to use the data from the case study as an example of the kind of thing that happens in situation like that...Generalization by analogy can occur once one recognizes that an analogous situation has been encountered...One projects each new circumstance against that background of accumulated experience. (p. 214)

According to this view of generalization, what we need to do is to accumulate lots of case studies which describe the induction experiences of many beginning teachers. My role as a researcher would be fulfilled once I provided you with my orienting framework, research methodology, the case studies themselves, and any interpretive insights that I was able to gain about the induction experience in specific cases. I would tell you the stories of Rachel, Beth, Sharah, and Hannah and leave it to you, the consumers of my research, to draw your own conclusions.

At the other end of the spectrum is the view expressed by Glaser and Strauss (1967), among others, that the purpose of indepth case study research is to generate information that will some day lead to lawlike empirical relationships, in our case about the process of induction. Wehlage (1981) states:

> Conceived in this way, field studies are simply the starting point from which to develop the kind of generalized knowledge characteristic of the most successful natural science. This view suggests that field studies by themselves do not offer insights that are both necessary and sufficient to create a body of disciplined knowledge about schooling...The goal of a body of lawlike theory might be facilitated by field-study research, but only classical

> experimental research design can produce trustworthy conclusions. (p. 213)

Here I would attempt to develop hypotheses from my case studies which would later be tested and verified and which would eventually become part of a "grand theory of teacher induction." After referring to Cronbach's (1975) famous statement that generalizations resulting from tested hypotheses seem inevitably to "decay" with time, Wehlage (1981) goes on to argue for a middle ground position somewhere between theoretical tower building and generalization by analogy. He agrees with Cronbach's (1975) position that theoretical tower building has been unattainable and is too ambitious, but he feels that Stake's (1978) position is not ambitious enough.

Wehlage (1981) argues that those who have searched for laws of human behavior have confused culturally determined and rule-governed actions with the behavioral laws of the natural sciences such as the law of gravity. He argues that an important goal for field-study research and for a "cultural science of education" is to develop generalizations about how "institutional structures interact with the social biographies of people to create meanings which in turn grade subsequent actions within the structure" (p. 219).

According to this view, those of us who wish to study the processes of teacher induction should aim for generalizations about the relationships between specific institutional structures and the phenomenological experience of individual beginning teachers. These generalizations (which account for the unique qualities of people and settings) transcend the people and settings studied because of factors which are common to both individuals and institutions. At the same time such generalizations will be transitory in nature because of the shifting character of individuals, institutions, and the cultural reality they reflect.

At the present time, Bob Tabachnick and I are trying to develop a series of "middle ground" generalizations from our four case studies which will hopefully illuminate the likely relationships between specific kinds of institutional practices and the actions of beginning teachers who possess particular motives and capabilities. One generalization that I feel we are able to make at this point in time is that the internalization of institutional norms by beginning teachers is an outcome which is problematic. I would now like to address this issue in a bit more depth: To what degree do beginning teachers adapt to institutional regularities; to what extent do they abandon or maintain teaching perspectives brought to the first year; and how, if at all, do first-year teachers impact the systems in which they work?

To What Extent do Beginning Teachers Adapt to Institutional Regularities?

Hanson and Herrington (1976) conclude in their study of probationary teachers in England: "The only way apparently open to probationers was to conform to the conventional wisdom and recipe knowledge of those around them" (p. 61). Despite the existence of much empirical evidence which would support this view and which demonstrates the vulnerability of first-year teachers to the pressure of institutional forces, studies also exist which demonstrate a great deal of stability between student teachers under pressures to change.

On the one hand, it has been shown in studies of both elementary and secondary teachers in several countries that beginning teachers experience statistically significant shifts in many kinds of attitudes during their first year. For example, beginning teachers have been shown to shift in an authoritarian direction in their attitudes towards pupils as measured by the Minnesota Teacher Attitude Inventory (e.g., Day, 1959; Ligana, 1970); to become more custodial in their attitudes towards pupil control (e.g., Hoy, 1968; McArthur, 1978); to feel that they possess less knowledge about teaching at the end than at the beginning of the induction year (Gaede, 1978); to shift from progressive to more conventional teaching perspectives (Hanson & Herrington, 1976); and to rate themselves as less happy and inspiring at the end of the first year than at the beginning (Wright & Tuska, 1968). These findings suggest that there is a loss of idealism during the first year and point to the notion of "reality shock" as a fact of life for first-year teachers. Lacey (1977) summarizes the impression given by this research as follows:

> The major finding of this research underlines the importance of discontinuity between training and the reality of teaching. The attitudes of beginning teachers undergo dramatic change as they establish themselves in the profession away from the liberal ideas of their student days toward the traditional patterns in many schools. (p. 48)

Despite the fact that much empirical research exists which would support this view that many attitudes evidenced at the end of student teaching are abandoned by the end of the first year and which would support the corresponding processes of reality shock and "situational adjustment," there is also research which demonstrates a great deal of stability between student teaching and the first year. Many, such as Bartholomew (1976), Giroux (1980), and Zeichner and Tabachnick (1981), have challenged the commonly accepted view that the socializing impact of the university is liberalizing and that the socializing influence of the workplace is conservative in relation to the university's influence. Furthermore, empirical studies such as those conducted by Power (1981) and Petty and Hogben (1980), in Australia, and by Mardle and Walker (1980), in England, support this hesitancy to accept the view of a progressive-traditional shift in teaching perspectives during the first year and demonstrate that certain attitudes of beginning teachers appear to be resistant to changes (e.g., perceptions of self in the teaching role).

Power (1981) summarizes the impression given by this set of studies when he concludes:

> The present evidence calls into question the pessimistic statements about reality shock for beginning teachers. If the conditions described by Dreeben (1970)...existed in this study and had the impact they suggested, it is difficult to believe that the influence would not be reflected in teachers' perceptions of themselves in the teaching role, in their evaluation of teaching as an occupational activity or in their vocational interests and aspirations, even at the group level. But no such evidence appeared in the present data. It can be speculated that teacher training has a greater impact on the professional socialization of teachers than has been realized. (p. 293)

Others such as Petty and Hogben (1980) and Mardle and Walker (1980) also call into question the notion of reality shock, but see anticipatory socialization as the most significant influence on teacher development. "Indeed precourse experience may be more profoundly influential than with the efficacy of training or the colleague control of later years" (Mardle & Walker, 1980, p. 99). It should be noted that in both groups of studies, those that demonstrate changes and those which do not, some teachers experienced significant shifts in attitudes while others did not. Furthermore, among those who changed, the changes were often in different directions. The conclusions of all of these researchers regarding continuity or discontinuity between student teaching and the end of the first year have been based in each instance on central tendencies or mean shifts in attitudes in the groups of teachers studied. For example, despite his challenge to the notion of reality shock for beginning teachers Power (1981) concludes:

> The results show the transition from student teacher to teacher to be characterized by remarkable stability...It can be seen that as a group, the sample revealed no significant change in perception of self in the teaching role, etc. At the same time...while there is group stability, there is considerable systematic individual change...There was little or no change for the majority of subjects, but there were some subjects whose scores changed moderately to substantially in one or the other direction. (p. 290)

In the final analysis when attention is focused on the socialization of individual beginning teachers, neither group of studies is very helpful in illuminating how specific beginning teachers are socialized in particular settings. We are almost never given specific information in these studies about the personal characteristics of the teachers or detailed information about the settings in which they work. On the one hand, first-year teachers are seen as prisoners to the past (either anticipatory socialization or preservice training) and, on the other hand, they are seen as prisoners to the present (institutional pressures emanating from the workplace). Significantly, in neither case are beginning teachers viewed as making any substantial contributions to the quality and strength of their induction.

I would like to suggest that neither of these views is very helpful in understanding beginning teacher socialization, that conformity (to the past or present) is not the only outcome of induction, and that even when conformity does occur that it occurs at various levels. In our own research we have found a conceptual framework developed by Colin Lacey (1977) to be very useful for helping us understand the degree to which the four beginning teachers conformed to institutional regularities and the extent to which they either abandoned or maintained teaching perspectives brought to the first year. Lacey (1977) challenges Becker's notion of "situational adjustment" (i.e., the individual turns himself/herself into the kind of person the situation demands) as the only possible outcome of socialization and proposes the construct of social strategy as a hueristic device for understanding how and to what degree beginning teachers are socialized into their roles. Lacey's framework rests on the important distinction (also drawn by Rosow, 1965) between socialization in terms of value commitment and behavioral conformity.

Lacey (1977, pp. 67-68) defines a social strategy as the purposeful selection of ideas and actions by prospective teachers and the working out of their interrelationships in specific situations. He then identifies three distinct strategies that he claims are employed by prospective teachers in the face of institutional constraints. First, internalized adjustment refers to a response where individuals comply with the authority figure's definition of a situation and believe these constraints to be for the best. This strategy indicates those situations where an individual willingly develops into the kind of person the situation demands and socialization entails both behavioral conformity and value commitment.

On the other hand, strategic compliance refers to those instances where individuals comply with the constraints posed by a situation, but retain private reservations about doing so. This strategy implies that individuals do not act in ways consistent with their underlying beliefs, and conformity is essentially an adaptive response without the corresponding value basis on which the behavior presumably rests. Finally, the strategy of strategic redefinition refers to those situations where changes are made by individuals who do not possess the formal power to do so. These individuals attempt to widen the range of acceptable behaviors in a situation and to introduce new and creative elements into a social setting.

While Lacey (1977) seems to reserve this term for only those attempts at redefinition that are successful, I would like to broaden the definition of strategic redefinition to include both those attempts which are successful and those which are not. In this way, the framework can now account for all instances of overt deviance. Obviously, one cannot determine which of the two types of strategic redefinition has occurred until the process has been completed. Furthermore, each of the two varieties of strategic redefinition may lead to different outcomes. For example, if an individual fails in a change attempt, he/she may choose to leave the organization or to engage in one of the strategies of situational adjustment. On the other hand, if the strategies at various times during the semester in relation to particular aspects of their experiences, the dominant mode of response for three students attempt is successful, the behavior of the individual might now fall within the range of acceptable responses within the institution.

Our own research provides some support for Lacey's (1977) contention that socialization in terms of behavioral conformity and value commitment varies independently and that under some circumstances at least beginning teachers may actively succeed in widening the range of acceptable behaviors in the workplace. As we reported in Phase One of our study (Tabachnick, et al., 1982), all of the students engaged in each of the three social strategies, but the most frequently employed was *strategic compliance*. Each of these individuals for different reasons reacted strongly against the constraints posed in their schools and/or by the university, but because of the severe nature of the constraints and because of their low status as student teachers, they generally acted in ways demanded by their situations while maintaining private reservations about doing so.

In the second phase of our study we again found support for Lacey's position, this time in the form of *strategic redefinition*. Specifically, three of the four teachers attempted to significantly redefine the range of acceptable behaviors in their schools in various ways (e.g., in relation to teacher-pupil relationships) and only one teacher experienced adjustment at the level of values and behaviors.

Two of the three strategic compliers were successful in their efforts while the third failed for various reasons. In the cases of the two successful "redefiners," one did so openly in plain view of her colleagues and principal and under strong pressure to conform, while the other did so covertly and subtly within the walls of her classroom. There were many reasons in each case why attempts at strategic redefinition either failed or succeeded. Among these were the degree to which teaching perspectives were developed at the beginning of the year and the strength with which they were held, the coping skills and political sensitivity of the teachers, the degree of contradiction between informal and formal school cultures, and the reactions of pupils to the teachers. We were particularly impressed with the tenacity with which two of the three teachers who attempted redefinition clung to their perspectives under strong pressures to change and with the key role played by pupil responses in strengthening or modifying these perspectives.

Without going into detail now about the specific combination of factors in each case that led to successful or unsuccessful strategic redefinition or to internalized adjustment in the case of one teacher (more detailed information about the specific individual and institutional factors related to each teacher's development is provided in Tabachnick, et al., Note 2), I think that our research shows that the adaptation of beginning teachers to institutional norms cannot be taken for granted and that first-year teachers under some conditions at least can have a creative impact on the workplace and survive. Two of the teachers strengthened or refined their student teaching perspectives even in the face of powerful institutional pressure to change.

A Summary of Conclusions Regarding Beginning Teacher Socialization

Throughout this paper many statements have been made regarding the influence or lack of influence of various socializing agents and mechanisms on the lives of beginning teachers. Following is a summary of some of the conclusions that I feel can be drawn from the available literature, including our own research at Wisconsin.

1. It cannot be assumed that institutional pressures on beginning teachers are of a unitary quality; all encouraging and/or discouraging the same kinds of actions. On the contrary, the literature suggests that various institutional agents and mechanisms often exert contradictory pressures on beginning teachers. This view of "intersender" role conflict in the lives of beginning teachers (Kahn, Wolfe, Quinn, & Rosenthal, 1964) is in opposition to the position expressed by Hoy (1968) that beginning teachers are socialized into a homogeneous school culture. There is also evidence in the literature of the existence of "intrasender" role conflict (Kahn, et al., 1964). Here, individual persons, in a beginning teacher's role set, send him/her conflicting messages about what is appropriate or inappropriate behavior in a particular setting. Studies of beginning teachers need to examine the different constraints and encouragements presented to beginning teachers by a variety of persons (e.g., pupils, colleagues, and principals) and by a variety of institutional structures (e.g., the form of the curriculum, the ecology of the classroom). Induction studies need to examine how different institutional agents and mechanisms reinforce or contradict each other as they interface with the purposes and goals of beginning teachers. A consensus view of institutional press is clearly inadequate for understanding the complex interactions among the institutional properties of schools.

2. It cannot be assumed that all beginning teachers experience "reality shock" or a "loss of idealism" during their first year. The literature indicates that some beginning teachers (under particular conditions) become more idealistic during their first year and that others are able to maintain

the level of idealism evidenced at the beginning of the year. Beginning teachers are not always faced with a "less idealistic" school culture (Helsel & Krchnaik, 1972) but even when they are, one cannot be certain of the eventual outcome of the socialization process.

3. The literature also indicates that beginning teachers will respond somewhat differently to the same set of institutional constraints and encouragements. The response of beginning teachers depends upon a number of individual factors such as a teacher's unique biographical history, the strength with which teaching perspectives are held, the level of a teacher's "coping skills," cognitive-developmental maturity and the degree of sensitivity to the organizational dynamics of schools.

4. Studies which seek to understand the development of beginning teachers must examine the socializing influence of persons and factors outside the professional context, in addition to the influence of individual and institutional factors within the professional domain. The personal and professional development of beginning teachers are closely related and one cannot understand one without understanding the other.

5. While general conclusions about the socializing influence of persons in particular role groups and of particular institutional structures cannot be made apart from consideration of how these various factors reinforce and/or contradict one another and apart from attention to the ways in which the personal characteristics of beginning teachers moderate these external influences, the literature does deem to indicate the following general conditions:

(a) Principals offer little direct assistance to beginning teachers and the neophytes rarely seek support and advice from those who formally evaluate their work;

(b) Experienced colleagues offer support and advice to beginning teachers only under certain conditions. Most of the socializing influence of experienced colleagues seems to occur indirectly through the beginners' observations of the "artifacts" of the work of their experienced colleagues;

(c) Pupil responses to beginning teachers seem to play a significant role in strengthening or modifying teaching perspectives brought to the first year;

(d) Beginning teachers are able to insulate themselves from bureaucratic controls when they are inclined to do so;

(e) The most pervasive and powerful factor in determining the level of institutional constraints may be technical control exerted through the timing of instruction, the form of the curriculum, curriculum materials and the architectural design of a school.

6. The literature also indicates that the effects of the university are not necessarily "washed out" by school experience during the first year as is commonly believed. There is a great deal of disagreement over the quality and strength of the initial impact of the university. There is also some evidence that beginning teachers continue to draw upon skills and perspectives developed at the university even under institutional conditions which would discourage the continued influence of the university.

7. It is clear that in-depth field studies of the first year of teaching are interventions into the lives of beginning teachers and that these studies necessarily alter, to some degree, the socializing influence of various individual and institutional factors. Studies of teacher induction need to systematically assess how the intervention of the researcher affects the experience of beginning teachers.

8. Finally, as argued in the previous section, the process of "institutionalization" or the internalization of institutional norms is only one of several possible outcomes of the socialization process. Evidence exists that behavioral conformity and value commitment do not always go together and that first-year teachers can have a creative impact on the school and survive.

The Need for an Administrative Response to the Presence of New Teachers

Finally, I would like to make just a few comments about the need for an administrative response to the presence of new teachers. As I stated last year in my presentation at the AERA Public Forum on Teacher Induction (Zeichner, Note 9), there is much evidence (both logical and empirical) indicating that we should be doing more than we are presently doing to help beginners make the transition into teaching. I'd like to briefly summarize some of this evidence.

First of all, one obvious reason for giving greater attention to the induction period is simply that there is not much that is being done now to support beginning teachers over and above the support which is provided to all teachers. Despite repeated calls for the development of structured and sustained induction programs to respond to the unique needs and concerns of beginning teachers (e.g., Bush, 1966), and despite the implementation of school "experimental" programs over the years, with few exceptions, "trial by fire" seems to be th modal pattern for inducting teachers. The recent ETS study (Elias, Fisher, & Simon, 1980) found that only five school district sponsored induction programs and only one statewide program. More efforts have clearly been made in the last few years, but it is doubtful whether the experience of most beginning teachers in the United States has benefited from these efforts.

Secondly, as Lewis (1979) tells us, there is no lack of evidence that teachers are dissatisfied with this condition of neglect. Teachers overwhelmingly indicate that they want or would have wanted greater assistance during their early years (McDonald, 1980). This, coupled with the fact that a substantial number of teachers regardless of the quantity or quality of their preservice preparation, experience a great deal of trauma and frustration during their induction makes the case for "greater attention" even more compelling. These feelings of anxiety and frustration by beginning teachers have been consistently reported in first-hand accounts of beginning teachers (e.g., Ryan, 1970; Hannam, Smith, & Stephenson, 1976) in empirical studies of the induction period (e.g., Eddy, 1969), and in the literature on the problems and concerns of beginning teachers (e.g., Johnston & Ryan, 1983).

Furthermore, when one logically examines the reasons for allocating greater resources to the induction years, the comments of first-year teachers are confirmed. For example, there is no question that preservice preparation, however excellent, cannot fully prepare teachers for the full range of classroom responsibilities that they will face in the early days of their careers. Ryan (1979) and others such as Lortie (1975) have described several aspects of this inevitable problem of "underpreparation." For example, the lack of rigorous admissions standards, the cursory nature of student evaluations, the problem of too little time together with the necessarily general as opposed to situation specific nature of preservice training all contribute to the position that more needs to be done for beginning teachers.

I would like to suggest, however, while supporting the view that more needs to be done in this area, that we think of induction in a way that has not typically been discussed in the literature. Dick Tisher (Note 10) made what I think is an enormously important point at a conference held here a few years ago. He argued that induction should be seen as a reciprocal process between individuals and institutions and that we should, along with our efforts to help beginning teachers, seek ways to take advantage of the ideas and resources that the beginners bring to their schools. The implications of adopting this viewpoint are substantial.

Secondly, as I argued last year at AERA, while the induction period is clearly important and in need of greater attention, we need to couple our efforts to ease the transition of beginning teachers with systematic efforts to reform the structure of teaching and workplace characteristics affecting the development of all teachers. It is my belief (while recognizing that there are special needs and concerns of beginning teachers) that problems related to teaching effectiveness, teacher morale, longevity, etc., are probably more closely related to the conditions of schools affecting the development of all teachers than they are to problems specific to the induction period (see Zeichner, Note 9). In our enthusiasm for making the lives of first-year teachers more productive and rewarding, let us not ignore opportunities for making schools more fulfilling places for all teachers.

Finally, and very briefly--what do we know about the impact of specific forms of interventions during the induction period? To my knowledge there have been three attempts to synthesize the evaluation literature that has been generated by the relatively few school-based induction programs and intern programs implemented to date (Elias, et al., 1980; Johnston, Note 11; Zeichner, Note 12). There are several conclusions that all three of these studies have drawn concerning our knowledge of the impact of planned and sustained induction programs. First, it is clear from an examination of this literature that only a handful of induction programs have been evaluated and reported. The induction literature contains many descriptions of induction programs and practices for which no evaluation or assessment is reported. Secondly, the evaluation data which do exist do little to illuminate the nature of impact of specific induction practices on either the immediate or long-term development of teachers. Despite much commonality in the kinds of specific practices which are advocated (e..g., see Lewis, 1979) and despite the fact that beginning teachers who participated in these programs were highly satisfied with the support received, we know very little about the relationships between specific induction practices (e.g., reduced workloads, buddy systems) and such things as teaching effectiveness, teacher morale, pupil achievement, and teacher longevity in the profession. Clearly there is much that remains to be done both in terms of developing new models for induction and in monitoring the impact of these efforts on teachers, pupils, and the institutions in which they live and work.

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Learning The Language of Practice

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I will argue in this paper that a major task confronting the beginning teacher is a learning task. This task is one of learning to think and behave in ways that are appropriate to the demands of teaching--what I will refer to as "learning the language of practice." Further, I will argue that learning this language of practice is not really possible until a beginning teacher actually engages in teaching. In fact, the "language of schooling" that these novices have been exposed to and encouraged to use as part of their formal education may be in conflict with and interfere with the actual demands of practice. Teachers must learn a new language--though it is not totally new, because they use it in other areas of their lives daily.

To argue these points, I will offer some ideas related to three basic sets of questions about teaching.

1. What is teaching like, and what is it that teachers must learn to do?
   - What are the essential characteristics of teaching?
   - What are the major components of teaching?
   - What do the characteristics and components of teaching suggest about the skills needed by teachers?

2. How do teachers learn to teach, and what kinds of things do they learn?
   - What changes occur as beginning teachers become more expert?
   - What kinds of experiences create the necessary opportunities for learning practical skill?

3. How might we characterize the knowledge and skill of the experienced practitioner?

The paper is organized into three major sections corresponding roughly to the three sets of questions mentioned above. The following section will set forth a conception of teaching as practical action. Next, I will review some of the recent literature on acquiring cognitive skill and provide an illustration from a study of beginning teachers learning to teach. I will conclude with some thoughts about the language of practice and some suggestions for further research.

Teaching as Practical Action

In the past, teaching has been characterized in a number of ways. The two most frequent types of characterizations have been metaphorical (cultivating, sculpting, healing, etc.) and behavioral (observables such as physical movement and spoken language, i.e., what teachers do and say). Research in cognitive psychology and research on teacher thinking in particular suggest that to understand teaching we need to understand the mental lives of teachers, the kinds of judgments, decisions, and plans that they make. This emphasis on mental events calls for conceptions of teaching focusing on the importance of mental action. I would like to propose here the notion of teaching as practical action.

The Practical Aspects of Teaching

Teaching is a practical activity, that is, it is one primarily concerned with issues related to practice. Teachers are faced daily with questions and problems about "what to do," situations quite different from the "what if" of theoretical questions and problems. The professions are separated from the sciences by this emphasis on practice--"on doing what needs to be done."

There are those in education, specifically adherents to technological "systems" notions such as planning by objectives, that think of teaching as a procedural problem. Procedural problems are practical problems that can be solved by applying an appropriate formula or technique (for instance, solving a mathematical problem using long division or computing one's gas mileage on a long trip). According to this view, teaching is a matter of acquiring and properly using a specific method or technique.

There is another class of practical problems, however, that I think better characterizes teaching. These problems are referred to in some of the philosophical writings as "uncertain practical problems" (Gauther, 1963). Uncertain practical problems are not easily solved by applying a rule, a technique, or a procedure. These problems are familiar to all of us. In fact, many of the problems that we encounter in daily life are of this nature. "Who shall I vote for?" "Where shall we spend our vacation this summer?" "Which wallpaper would look best in the kitchen?" "What kind of national defense expenditures are necessary?" These kinds of problems are difficult, and there is no agreed upon, uniquely suitable procedure that ensures solution.

Uncertain practical problems, whether of personal or national importance have many features in common. Reid (1979) characterizes them in the following way:

> First of all, they are questions that have to be answered--even if the answer is to decide to do nothing. In this they differ from academic, or theoretic, questions which do not demand an answer at any particular time, or indeed any answer at all. Second, the grounds on which decisions should be made are uncertain. Nothing can tell us infallibly whose interests should be consulted, what evidence should be taken into account, or what kinds of arguments should be given precedence. Third, in answering practical questions, we always have to take some existing state of affairs into account. We are never in a position to make a completely fresh start, free from the legacy of past history and present arrangements. Fourth, and following from this, each question is in some ways unique, belonging to a specific time and context, the particulars of which we can never exhaustively describe. Fifth, our question will certainly compel us to adjudicate between competing goals and values. We may choose a solution that maximizes our satisfaction across a range of possible goals, but some will suffer at the expense of others. Sixth, we can never predict the outcome of the particular solution we choose, still less know what the outcome would have been had we made a different choice. Finally, the grounds on which we decide to answer a practical question in a particular way are not grounds that point to the desirability of the action chosen as an act in itself, but grounds that lead us to suppose that the action will result in some desirable state of affairs (p. 189).

A practical problem, then, is "a problem about what to do...whose final solution is found only in doing something, in acting" (Gauther, 1963, p. 49). An uncertain practical problem, unlike a procedural problem, is so bound up in complexity and uncertainty that rules and techniques cannot guarantee a solution.

The Action Aspects of Teaching

Above it was stated that final solution to a practical problem is found only in doing something, in acting. For this reason, it makes sense to examine teaching from an "action" point of view. Kerr (1981) has done just that by analyzing the teaching act using a framework borrowed from the philosophy of action. Simply stated, she argues that complex acts like teaching are mediated by other acts that may be judged in terms of their adequacy for achieving desired results. So in teaching, the major act might be summarized as "engaging in activities the point of which is to facilitate learning" (p. 74). Teachers cannot achieve this act directly but must try to achieve it by doing mediating acts such as selecting materials, asking students questions, providing demonstrations, and so on.

Kerr further argues that any goal-directed action can be factored into three components: (1) choice of a goal, (2) choice of means (or a plan) to reach that goal, and (3) acting on the plan. She then goes on to describe teaching as having three primary components:

1. Choosing a learning to encourage,
2. Designing a plan to encourage that learning, and
3. Acting on the plan (implementation).

Kerr's analysis highlights two important points about the practice of teaching. First, her factoring of the teaching act into three components brings proper attention to the fact that teaching involves much more than just implementing instruction. Planning (including the choice of goals) has an integral and necessary relation to the more visible classroom interaction component. In fact, this breakdown portrays teaching as a design profession, a profession that "devises courses of action aimed at changing existing states into preferred ones" (Simon, 1981, p. 129).

Second, the notion that the mediating acts of teaching may be judged in terms of adequacy suggests that the quality of teaching (teacher effectiveness) may be assessed apart from the post hoc and distal measures currently used such as student performance. It is on this latter point that I would like to dwell a bit longer.

In an action analysis, mediating actions are only useful if they are adequate for accomplishing the desired result. For instance, if I want to turn on the light (final desired action), I turn on the light switch (mediated action). This only works if the switch is wired to the light that I intend to turn on. That is, the wiring must be connected for the mediating action (switching) to be adequate for the final action (lighting). In assessing my "lighting" behavior, we can examine and judge the adequacy of my mediating actions--the "connectedness" of the action ("Is that the right switch and is the wiring connected?").

In the same manner, Kerr argues that within the components of the teaching act, we should be able to judge the adequacy of the mediating actions chosen by a teacher to achieve for any component teaching action only if the natures of (1) the subject matter, (2) learning, (3) the particular learner, (4) the available means and resources, (5) the political and moral contexts, and (6) the other component teaching actions are taken into account. She further states, "The pertinent standards of assessment would be: what in the research community is believed about the nature of the subject matter, the characteristics of the learners and how one learns different things; the moral and political context of the case of teaching; and what is believed in the research community about the range of appropriateness and efficacy of available techniques and technologies" (p. 90).

In summary, I am proposing a view of teaching as practical action--as a complex set of actions oriented toward solving uncertain practical problems. In addition, these actions can be factored into three major components of goal setting, planning, and implementation to which standards of adequacy can be applied to assess the quality of the teaching acts. These comments portray a general picture of the nature of teaching (practical problem solving and design) and the knowledge that should be brought to bear in any teaching act (Kerr's six considerations).

What is teaching like, and what is it that teachers must learn to do? One answer is that teaching is practical action, action that involves solving uncertain practical problems and bringing subject matter and professional knowledge to bear in unique and complex situations. How teachers learn to do this will be discussed in the following section.

The Acquisition of Cognitive Skill

In recent years, cognitive psychology has redirected its attention from research describing cognitive structure and processes in fairly restricted and well-defined situations to more complex and ill-defined task environments like reading, writing, and solving science or math problems. A research paradigm that has been used to examine these problems involves comparing the performance of individuals who are less experienced with the problem area with that of more experienced individuals. This comparison of novice and expert performance has led to fruitful theorizing about the kinds of changes that occur as a result of gaining experience. In the process of this research (often referred to as research on the novice/expert shift), cognitive researchers have again become interested in the acquisition of cognitive skill, or more simply put, in learning.

What is it that makes someone an expert? What kinds of things separate the more experienced person from the less experienced person? At the risk of oversimplifying the research findings, expert performance might be described in the following manner:

1. Experts are more likely than novices to recognize (perceive/understand) and represent problems using large-scale functional units (e.g., schemas, scripts, routines) that focus on the crucial underlying structure and components of the problem (de Groot, 1966; Hinsley, Hayes, & Simon, 1977; Larkin, 1979; Newell & Simon, 1972; Schoenfield & Herrmann, Note 1).
2. Experts are more likely than novices to employ skills of search, evaluation, generation of alternatives, etc. in the form of condition-action pairs (referred to as production systems) that are compiled into sophisticated working methods and procedures (Anderson, 1982; Chase & Simon, 1973; Hayes-Roth, Klair, & Mostow, 1981).
3. Experts are more likely than novices to incorporate global and often qualitative reasoning to plan complex actions and procedures at a low level of detail before working out a problem in all its detail and complexity (Greeno, 1976; Larkin, 1979).
4. Experts are more likely than novices to mentally simulate action prior to its execution by means of incorporating complex and detailed representations of action within a particular environment (de Groot, 1965; Larkin, 1979; Jeffries, Note 2).

In other words, experts seem to think about and act upon the world using large, integrated patterns of knowledge and skill that are integrally connected to specific conditions for action. These patterns allow experts to approach problems in more holistic, figural ways, often in the form of mental simulation of action.

If we assume that this summary incorporates some important differences between novices and experts, what might be the conditions that provide an opportunity for someone to get better at something? In other words, what might be the conditions for learning? Langley and Simon (1981) summarize some of the state-of-the-art conceptions by stating that learning may involve modification of any component of the "information processing system" including: (1) additions to or reorganization of the knowledge base; (2) augmentation of the recognition system, or index, for the knowledge base; (3) augmentation of search strategies; (4) modification of evaluation functions stored in memory and used to guide search; (5) apparent augmentation of short-term memory capacity by storing larger chunks of information in long-term memory; (6) augmentation of lexical, syntactic, and semantic knowledge in language processing systems; or, (7) enrichment of the representations of information (ways of organizing information) in memory.

I have drawn on these conceptions and others (e.g., Simon, 1980) in an attempt to summarize the critical conditions for learning. Again, at the risk of oversimplifying a complex process, I have reduced these to two conditions. According to cognitive theory, I would expect learning to take place to the degree to which the following conditions are present: (1) the learner has access to needed information; and, (2) the learner has an opportunity to practice.

Access to Needed Information

Learning is commonly portrayed as a problem solving process relying upon hypothesis testing as a primary mechanism. As such, the success of learning depends upon having access to the right kinds of information at the right time.

To learn how to do something, at least three kinds of information are needed. First, the learner needs examples of appropriate and effective action, whether it be the steps involved in working out an algebra problem or a method that a teacher can use for handling a classroom disruption. This information becomes part of the learner's knowledge base, or repertoire of action, that can be drawn upon as needed.

Second, the learner needs to have opportunities to collect information about when a certain action is appropriate. This depends upon opportunities to associate a specific action with a specific situation or condition. To accomplish this pairing, a learner needs access to specific situational cues (related to a condition or task) that signal the appropriateness of an action. Also, the learner needs access to the components or series of actions leading to the final performance. To build on the examples above, one must learn under what conditions it is appropriate to subtract a constant from both sides of an equation or under what conditions it is appropriate to ask a student to leave the room.

The third kind of knowledge that a learner might need is called knowledge of results. Learning depends on knowledge about the success or failure of a specific hypothesis or action. A system cannot successfully modify itself without some kind of feedback on the improvement or degradation of performance. Does a specific method lead to a desired state? Is the equation simplified or did the disciplinary measure work?

Opportunity to Practice

Experienced teachers and learners know that a good way to really learn something is to take what is new (knowledge, skill, etc.) and make it one's own by using it, playing with it, or otherwise trying to employ it in different situations. As alluded to above, skill depends not only on having a set of actions or methods at one's disposal but even more so on knowing when it is appropriate to act in a certain way. Learning how to do anything of any complexity requires learning how to coordinate and orchestrate a number of different methods and procedures.

Cognitive researchers have highlighted two results of practice. The first, automaticity, refers to the process of combining, or chunking, knowledge into increasingly larger functional units that require less attention to activate and draw upon than did trying to keep track of all of the individual components. Automaticity reduces the strain on short-term, working memory and increases one's ability to do more things simultaneously.

A second result of practice recently focused on by cognitive research is the compiling and refining of procedures and working methods. Anderson (1982) has developed a model of skill learning that describes how skills are employed as a function of experience. He states that when skills are first learned, performance is based on the person drawing on and implementing procedures in a piecemeal and one-at-a-time manner. As skill improves, the learner begins to combine methods and procedures and to fine-tune aspects of performance until they are no longer used individually but employed in larger, smoother functioning procedures. Practice, then, plays an important role in allowing the learner to take new knowledge or information about conditions and actions and then to improve one's facility at using these components by allowing the learner to try to orchestrate them in new situations.

How do teachers learn to teach? Primarily by experiencing actual teaching situations where they have access to needed information about ways to pair appropriate knowledge and skill with specific problem situations. As a result of having opportunities to practice professional skills, teachers compile and refine them into more comprehensive and smoother functioning methods. What kinds of things do teachers learn in these situations? They learn new knowledge and skill. They learn how to pair old and new knowledge with specific conditions for action. They learn how to orchestrate condition-action pairs into large functional units like scripts and routines. In short, they learn how to solve practical problems.

A Study of Learning to Teach

We have recently completed a study of student teachers in their last year of training that illustrates some of the processes discussed in the previous section (Yinger & Hill, Note 3). We set out to focus on the acquisition of cognitive skill in planning, but in the process, became interested in what and how these novice teachers were learning. By the end of the study, our efforts were directed toward trying to locate and describe opportunities for learning in practicum settings and to generate some useful hypotheses about how teachers learn to teach.

Method

Participants in this study were eight female students in the senior year of an Early Childhood Education Program at a large, midwestern university. The students were entering what is called the Professional Year of their training. The Professional Year is a model of preservice elementary teacher education that concentrates the upper-level professional courses into three consecutive quarters near the end of the student's undergraduate education.

Methods courses are combined with extended field experiences during the first two quarters, leading up to the student teaching experience in the third quarter. Also, students are required to participate in The September Experience, a three week field experience in schools from the opening day of school until university classes begin at the end of September.

Data were collected from the eight participants during the whole Professional Year in the form of entries in personal journals, interviews, and classroom observation. Almost daily entries in the students' journals were the major source of data for the research. Log keeping of some kind was a normal requirement of the Professional Year experiences. For the purposes of this study, the participating students were asked to use a journal format that has been useful in previous studies of teacher thinking (Yinger & Clark, Note 4). The journals were treated and analyzed as personal documents (Allport, 1942; Yinger & Clark, Note 5). Information collected in the observations and interviews were used to supplement the students' own comments and to provide an elaborated view of the learning setting and the students' behavior within it.

Findings: Frameworks for Thinking and Learning

As one would expect, the journals yielded a variety of information about the student teachers' thoughts about the classrooms they were participating in--the children, the curriculum, the resources, the "cooperating teacher," and so on. Students also recorded thoughts about learning to become a teacher, learning to survive within the institutional and social context of the school, learning how to coordinate and juggle the demands from university classes, interactions with the supervisor, and personal conflicts and resolutions. Any of these topics could have become the focus of the analysis of the students' experiences. However, as we read and studied the journals and our interview and observation notes, we began to organize the students' learning experiences along two lines. One is related to task and process--how the students were approaching learning in the different settings; the other organizer is one of content--the kinds of things the students were learning. For the purposes of this paper I will focus on the first set of results.

We used the contents of the journals as clues to what the student teachers were thinking about and learning. Each of the four field practicum experiences were different in grade level, duration, frequency in the setting, and amount of accompanying university course work. However, across the different experiences two different patterns of thinking and learning seemed to occur regularly in all of the student teacher participants.

In September Experience, journal entries initially reflected excitement about the prospects of the field experience. Students mentioned that they were spending most of their time observing and trying to learn the children's names, figure out the teacher's management system, learn the curriculum, and locate the available resources. All of these reports appeared to be those of an "outsider" to the setting trying to bring meaning to what was seen.

As time progressed, attention continued on what the teacher was doing with the children; activities were mentioned by name, though rarely more deeply described. Also comments began to emerge in the journals of a critical or evaluative nature. Students would describe an incident that they observed and then counter with "what I would have done" or "what I will do when I have my own classroom." Several students also commented on their boredom due to the lack of opportunity for them to become involved in the classroom or on their disappointment in what they felt were the "mundane" tasks that teachers gave them to do.

In all the students' journals for September Experience only two opportunities were mentioned for them to go beyond their "outside observer" role. One was what seemed to be a conscious effort by each student to become more closely involved with individual children in the class. This took the form of focused observations and periods of individual interaction. The second opportunity, which did not occur for every student, was to be asked by the teacher to be responsible for one reading or math group or for another small group activity.

In these latter instances, the student teachers' journal entries abruptly changed. Cursory references to observed activities and the "what I would do instead" comments almost disappeared. In place of them were more detailed plans for activities or lessons. The tone shifted to "what I will do" and often to "what will I do?". Students appeared to be shifting their framework for thinking from that of an outside observer to that of an inside participant. For the most part of September Experience, however, students only rarely made this shift and then only toward the end of their time in the setting.

During fall quarter all eight students were in preschool settings. Four of the students were entering for the first time classrooms that had been functioning for at least a month. These student teachers had to attempt to join an already functioning system that usually included a head teacher and several aides or assistant teachers. Journal entries reflected the same "outsider framework" as in September Experience. Students talked mainly about activities and materials--especially about materials, since a great deal of the planning and teaching in these classrooms focused on arranging materials that the children could use in free play activities. The students rarely, if ever, talked about rationales for materials or activities, goals for children, or alternatives considered. Their outsider framework was further reflected in the continuation of critical, evaluative comments. Also, they seemed to care little about seeking answers to questions about why things were being done certain ways.

Like in September, opportunities arose for students to become more integrally involved in the classroom. These were also of a limited nature and most frequently involved work with individual children on skills that the student and the cooperating teacher had agreed needed extra attention. It is also worth noting that this involvement was often initiated by the student. It was not until the end of the quarter that students had the opportunity to take on a larger role in the classroom.

The last week of the quarter was designated "Head Teacher Week" for the students. In the week prior to this, the journals again shifted to reflect the insider framework. Plans, goals, detailed activity descriptions, procedure lists, and questions that needed to be answered all surfaced again. This time it was on a larger scale than before. Students were going to be responsible for the whole classroom, not individual children or isolated activities. It was not until this point that we were able to find enough examples of learning to begin characterizing the differences in the learning process between the outsider and insider frameworks.

As an insider, learning seemed to be best characterized as "learning by doing" (Anzai & Simon, 1979). Students learned as they tried to apply their knowledge about curricula and methods to specific students in a specific setting. They learned from their mistakes. They formulated plans, implemented them in the form of activity centers or "group time," and then watched what happened. There were numerous entries in the journals recording their observations about what went wrong and how they might change it next time. Talk was about "what I do" and "what works."

Learning by doing often took the form of cycling between acting and observing. A student might plan, then implement it, observe what happened, and then change the plan or the action next time. Occasionally the student would consult her supervisor or observe the cooperating teacher to see how she accomplished the same task.

If the insider framework is characterized by learning by doing, the outsider framework is characterized by learning by observation. Outsider observation, however, seemed to be different from the observation that the student teachers did as insiders. We have labeled insider observation as "looking with a purpose"--observing to find out "how I did," "what the children did," or "how she (the cooperating teachers) does it." Insider observation is directed toward answering a particular question of practice.

In contrast, the observation that the students did as outsiders was less implementation-oriented, though not necessarily less specific. The context seemed to be more general and theoretical. Students were learning about how another teachers acts. Sometimes new practice was observed, and students noted the techniques--a process not unlike the "collecting" of information that is a part of all learning. At other times, students recorded criticisms of what they were seeing. Here students were "comparing notes," deciding what they would do if they were in the same situation. Outsider observation allowed the acquisition of information, but seemed to be very different from the trying out of one's knowledge and skill in a practical setting.

In the winter quarter, journal entries and interviews continued to suggest the outsider/insider distinction. Students spent only two days per week in an elementary classroom this quarter. The coursework in their elementary methods courses this term required them to develop plans in the various subject matters and then implement them in their classrooms.

Students frequently commented on the heavy workload this term and the difficulties they had meeting their university instructors' expectations for what they could get done in two days a week. Nearly everyone commented that they were learning a lot from their classes; criticisms were mainly based on their feeling that they were not being given enough practical suggestions for implementation. Students were picking up new knowledge and skills, but their orientation was clearly of a more practical bent.

During this quarter, both the outsider and insider frameworks appeared in similar patterns to previous quarters. At first, students' thinking and learning was more as an outsider. When they began trying to figure out how to implement their assigned university assignments, insider frameworks emerged. These frameworks, however, appeared to be very narrow because of the students' limited contact with the setting. The students never revealed a broad insider's perspective, apparently because of their isolation from the daily ebb and flow of the classroom.

Student teaching during the spring quarter was the time when students had the most opportunity to operate through the insider framework, as one would expect. The student teacher's involvement is designed to progress week by week from teaching one full day each week, to teaching fifty percent of the time, to finally taking on complete responsibility for planning and teaching.

The journal entries for this quarter contained numerous references to learning by doing. Many of the references were to learning from their mistakes. One student even referred to her own learning:

> My reading groups are going well. I find the more I do, the more I learn things like "I'll do this next time and not this, or that was perfect." I'm eager to take on more...(4/14).

In summary, the students in this study seemed to be approaching learning in their practicum settings from two perspectives--what we have called frameworks. The "outsider framework" seemed to be characterized by learning by observation. The kinds of things that were learned included knowledge about the particular setting and participants, new instructional methods and techniques, and modifications or clarifications of one's implicit theories or beliefs about teaching. Learning tended to be more abstract and theoretical. Learning also tended to be more reflective.

Learning in the "insider framework" also involved observation, but it tended to be more specific and oriented toward assessing or improving one's own practice in specific contexts. Learning in this framework has been characterized as "learning by doing" and seems to involve an alternating between acting (planning or implementing) and observing the outcomes. Thinking seems to be oriented toward the practical--"what works"--and may be less reflective.

Some Comments About Learning By Doing

When I ask teachers to identify the most beneficial component of their professional education, student teaching comes out as number one in nearly every case. Similarly, when I have asked doctors, lawyers, engineers, or other professionals the same question, they nominate their interships, practicums, professional co-ops, or other "on-the-job" experiences. Why are these learning experiences so highly valued? Evidently, because a lot of learning takes place that is useful when one enters the profession. Why does "useful" learning take place? One possibility, based on the findings of the study described above, is because novices have an opportunity to develop in ways that only take place when they have an opportunity to try out their knowledge and skills in actual practice. In other words, "learn by doing" presents unique and crucial learning opportunities.

Earlier I mentioned that to get better at something (or to learn anything for that matter) one must have access to the right information at the right time and be able to practice what one already knows. Learning by doing in practical situations offers these conditions in a uniquely assessable manner and in a manner that allows novices to learn the kinds of things that make them function more like experts.

Experts are able to see, understand, and think about problems using large-scale functional entities (e.g., schemas, scripts, routines) that organize and simplify action in meaningful ways. The essential characteristic of each of these notions is that they are ways of representing how experienced people group together complex action and procedures so that they function cognitively as a unit.

Learning by doing allows one to begin building up these representations of action, because trying to do something puts one in close contact with all of the intricacies that the task and the environment present. Stated in terms of the conditions for learning, learning by doing offers a wealth of co-occurring information, often for the first time, that a person can begin organizing as a meaningful whole.

Two such units that seem to be an important part of teachers' thoughts about classrooms are activities and routines (Yinger, 1977; 1979). In this study, the student teachers made frequent reference to these two entities. We hypothesized that a large portion of the new knowledge that they acquired in the field settings were in terms of new activities and routines for instruction, management, or even planning.

Also, through learning by doing student teachers gained access to information that is less apparent to one who is only observing, that is, knowledge about underlying considerations and components that become important as one tries to made day-to-day decisions.

Knowledge about what things to consider when planning would be an example of this type. Planning is difficult to observe because of its cognitive nature. An observer, even if afforded the opportunity to see planning take place, would most likely not realize the myriad considerations that must be taken into account until having to formulate a plan of one's own. However, as one tries to plan, tries to anticipate the future, the complexity of teaching becomes readily apparent.

Learning by doing is also conducive to pairing conditions of practice with appropriate action. Traditionally, professional training has emphasized knowledge and technique (method, procedure) under the assumption that competent action is based primarily on the possession of the necessary skills. Recent research indicates that competency is not just a sum of the subskills but rather depends on being able to select and use skills appropriately--at the right time under the right conditions. (This may explain the limited success of training programs like Competency Based Teacher Education that have focused almost exclusively on the second component of the condition-action pair.)

Two things need to happen for one to determine if behavior is appropriate for the problem or situation at hand (Anzai & Simon, 1979). First, knowledge of results, i.e., knowledge about effectiveness, must be available. Second, to correct behavior that has produced undesirable results, one must be able to reason backwards to preceding behavior that can be interpreted as having caused the outcome. Learning by doing is effective in this case, because to an "insider" actually carrying out the action, knowledge of results is usually more direct and clear. In other words, the actor is likely to be in the best position to receive feedback. In addition, the actor is able to more easily reason backward, because preceding pathways of action, especially cognitive action, are more personally accessable to evaluation.

As "outside observers" in this study, the student teachers had access to several kinds of information. First, they had access to general patterns of teacher and student behavior. This information could elaborate their knowledge about how classrooms function at a general level. Why teachers and students functioned this way was less accessable. They also had access to instructional technique--what teachers did when interacting with the children. Again, this information was generally behavioral, focusing on what was done, and was rarely accompanied by the rationale for the behavior.

As "inside participants," we hypothesized that the student teachers had access to more information. They learned what cues are relevant in a specific situation. They learned what constitutes feedback. They learned what information cues the production system, that is, what really constitutes a condition for certain action.

Second, because of the enhanced accessability of information, student teachers were better able to develop if-then relationships between specific conditions and specific actions (production systems). Also, they had numerous opportunities to revise and fine-tune these production systems.

Third, as a result of practice in the use of various production systems, they were able to begin to compile the individual production systems into larger, more smoothly functioning procedures and methods. The research data provided numerous examples of the progressive development of workable methods and procedures that were made possible by opportunities for learning by doing.

The study described here showed less evidence of other "expert" behavior developing, such as planning ahead using the big picture and mental trying out prior to implementation. It did, however, suggest the development of the knowledge base needed to carry out these skills. Our research on teaching planning (e.g., Yinger, 1980; Clark & Yinger, Note 6; Yinger & Clark, Note 7) indicates that effective planning (including mental projection of action) requires a conception of students, materials, etc., that is detailed enough to permit manipulation. In other words, effective planning requires an extensive knowledge base related to the problem at hand. We have argued above that one of the major advantages of learning by doing permits the connecting of conditions, to actions, and to consequences that serves as an important component of knowledge about the situation. We would therefore expect learning by doing to be a primary way in which a framework of knowledge would be assembled in the first place.

The Language of Practice

One of the most important things we are learning about skilled performance by experienced practitioners is that they are able to effectively draw upon and orchestrate a tremendous body of knowledge using skills that are uniquely suitable for the problems at hand. In other words, attaining expertise involves mastery of a unique set of symbols and operations--mastery of what I will call here the language of practice.

Bruner has defined intelligence as the degree to which one has internalized the tools provided by a given culture (Bruner, 1971, p. 22). This definition highlights the role that mastery of specific forms of knowledge and cognitive operations plays in defining one's "intelligence" or ability. Bruner further argues that the most central tool of a culture is language. I do not think that we would be in serious error to conceive of a profession as a type of culture, with a specific "language of practice" as one of the most important tools.

I do not intend to venture deeply into the role that language plays in thought and action. What I want to discuss are some recent ideas about how the forms of language we are exposed to influence our ways of thinking. I will especially rely on recent work of David Olson (1977a, 1977b, 1980) who has explored the differences between spoken language (what he calls "utterance") and written language (what he calls "text").

Olson argues that the form that our knowledge takes is dependent upon the purposes for which it was acquired. That is, different types of cognitive activity produce somewhat different representations of reality (Olson, 1977a, p. 69). He states further that "scientific knowledge" is much more closely aligned with the form of (and assumptions underlying) written language whereas "commonsense knowledge" is aligned closely with spoken language. In fact, these two different forms of knowledge, provide very different representations of reality.

Olson (1977a) has distinguished between spoken and written language (between utterance and text) in terms of how meaning is constructed, how truth is construed, and the functions that language serves. For meaning, spoken language appeals to shared experience and interpretation and to a common intuition based on commonsense knowledge. An utterance is meaningful if it is understood by the listener. In contrast, written language appeals to premises and values of logic for deriving implications and meaning. The appeal is formal rather than intuitive, and the criterion for successful creation of meaning is its formal structure. In spoken language a statement is true if it seems reasonable, plausible, and congruent with traditional wisdom. Truth in written language, such as a prose text, is judged by the correspondence between statements and observations; a statement is true because true implications follow from it. The interpersonal function of language is primary in spoken language. To be successful, an utterance must be appropriate to a specific listener. In contrast, the logical or ideational functions are primary in text; the writer and the reader have only an indirect relation.

These two very different representations of reality have produced different ideas about knowledge and intellectual competence. Olson (1977b) discusses the traditionally low regard held for commonsense knowledge (the conception of reality that is part of everyday practical experience) in comparison to scientific knowledge (the coding of reality in formal academic disciplines). He reports that three classes of people have been identified as primary representatives of the commonsense orientation: nonliterate members of traditional societies--"savages," uneducated members of our own society--"the ignorant," and inexperienced young--children. He further goes on to state that commonsense knowledge can be roughly characterized as:

1. Coded for action rather than universal truth.
2. Specialized in the particular and concrete--"context sensitive."
3. Coded in generalizations like proverbs or aphorisms.
4. Containing elements of knowledge not in complete agreement with each other.
5. Value laden.
6. Using the intellectual tools of illustration and example rather than definition and deduction.
7. Socially conceived and structured rather than logically based.

I want to argue that this type of knowledge is not unique to the uneducated, the ignorant, and the young but that the knowledge of the professional--the language of practice--has many of these same characteristics. Professional knowledge and skill is oriented toward action, toward practice. It is specialized and context sensitive. Because it is a language or practice, it is heavily value laden. It is socially sensitive and structured and relies upon large-scale components of action in the form of example, illustration, and proverb. Because knowledge is acquired in heterogeneous situations and is retrieved only if it is relevant to a particular situation (Olson, 1977b, p. 71), professional knowledge may not be entirely consistent.

Anthropologists (e.g., Levi-Strauss, 1966) have pointed out that commonsense thinking cannot be simply described as being more "primitive" or concrete. This type of thinking involves abstraction, inference, and prediction and is able to deal with underlying processes and intent. It is only very different. What are the implications of this comparison between commonsense modes of thinking and the thinking language of professional practice? I am not entirely sure. It does suggest that we rethink our ideas about practitioners, especially in terms of the possibility of "scientific practice" and the nature of the knowledge and skills that effective practitioners draw upon. It also suggests that we examine more closely how practical knowledge and skills are learned.

Learning the Language of Practice

One implication of this description of the "language of practice" is that professional education that emphasizes forms of thought more characteristic of scientific knowledge may leave students poorly prepared to effectively think about and execute practice. In effect, reliance upon tests, "scientific" theory, and technological method for the means of education may still leave practitioners unequipped, or to use Bruner's definition, unintelligent.

It has been argued that written language in the form of texts involves a substantially different and more specialized language code than does spoken language. Because texts play the dominant role in formal schooling, it has also been argued that written language is the "language of schooling" (Olson, 1980). There are two important effects of this dominance of texts in schooling, including professional education. First, the linguistic form of expository written texts places an emphasis of the definition of terms and on formal meanings rather than upon typically encountered instances (Olson, 1980, p. 79). In other words, texts promote abstract definitions and meanings at the expense of providing particular instances. (Of course, texts often provide examples, but the emphasis is usually upon the exemplification of the general rule, rather than the exception.) As a result of classroom experience the novice teacher, then, may be knowledgeable of the general case, the theory, or the rule, but be unaware of how these ideas get worked out in practice.

A second effect of the dominance of texts in formal schooling is related to how students relate to the information that written language provides. Because of the split between the speaker and his or her words and because of the emphasis on the logical function in texts, there is a tendency for readers to regard text as an authoritative, objective description of reality that is above questioning. Olson (1980) has compared this to the way ritualized speech is regarded in traditional religions. "When a child reads a text or when a teacher teaches what a text says, the language appears to originate in transcendental source just as does the ritual speech--it is not ordinary speech and it is therefore, above criticism" (p. 80). Novice teachers may also approach information provided in teacher education programs in this same manner. They may be uncritical of what they have been taught, not realizing until they begin teaching that there is a mismatch between the forms of knowledge they have acquired and the demands of practice. (This mismatch may partially account for the frustrations voiced by the teachers in our study during winter term, as they alternated almost daily between the college classroom and their field placement.)

The difficulty faced by beginning teachers in learning the language of practice is further complicated by the fact that they must learn subject matter knowledge that will become much of the content of their own instruction. This content is coded and understood in the language of text, the language of scientific knowledge. The means for conveying this content is coded in the language of utterance, the language of practice. Teachers must learn to juggle these two very disparate ways of thinking and acting, a task that Broudy (1977) has aptly referred to as uniting "the particularity of pupils with the universality of knowledge" (p. 3).

How is the language of practice learned if it cannot be learned from texts? In the previous section, I argued that it is primarily learned by doing--learning by engaging in practice within the rich and uniquely complex context of practical problems. The language of practice is the language of commonsense thinking, and as such, is not new to teachers. It may be that teachers need to realize that the text-based, "scientific" mode of thinking is not universally applicable and that there is another, more appropriate means for representing practical reasoning. It seems ironic to propose"relearning" a non-school mode of thinking to school teachers. Yet there are convincing arguments that suggest that "the general theories of science and philosophy that are tied to the formal uses of text provide a poor fit to daily, ordinary, practical, and personally significant experience" (Olson, 1977a, p. 278). Practical reasoning, with its roots in oral language and commonsense thinking, may be a much more appropriate means for representing and carrying out practical action.

Describing the Language of Practice

How can we as researchers and educators come to understand and describe the language of practice? Commonsense and practical knowledge is obviously transferable. We have all learned to function in this manner from stories, proverbs, aphorisms, and advice of those wiser. What would become of efforts to codify this knowledge, to write it down? Would the form of written language distort and destroy its utterance-like character? Maybe not. I offer this answer because of my contact with an effort to describe a language of this type.

Christopher Alexander and his associates in architecture have been working for almost twenty years to understand and propose a language of practice for planning and building. In the companion volumes, A Pattern Language (Alexander, Ishikawa, & Silverstein, 1977) and The Timeless Ways of Building (Alexander, 1979), they describe and propose a language that an individual can use to think about, plan, and construct towns, buildings, public spaces, homes, and gardens. The power and uniqueness of the language is in its form. Without doing justice to this effort, I will try to convey some of the important features and attitudes within the pattern language in a brief description.

Alexander describes a pattern as a "unitary pattern of activity and space, which repeats itself over and over again, in any given place, always appearing each time in a slightly different manifestation" (Alexander, 1979, p. 181). Every place is given its character by certain patterns of events that keep happening there. The quality in places has the same quality found in nature--the repetition of patterns with variation and uniqueness in the way patterns manifest themselves.

In the pattern language, each pattern describes a problem that continually occurs in the environment and then describes the core of the solution to that problem. Whereas natural language uses words and rules of grammar and meaning to create meaningful sentences, a pattern language uses patterns that specify connections between other patterns to produce buildings and places. Each pattern expresses a relationship between a context, a problem, and a solution. It is like a rule, but one that can produce a unique situation every time it is used.

The pattern language embodies a systems perspective. It is a traditional systems perspective with its organic and biological connotations as compared to the systems perspectives of industry and technology with their emphasis on control and procedure. Every pattern is embedded in larger patterns, and smaller patterns are embedded in it. The 253 patterns range in scope from the scale of the community, e.g., "Independent regions," "City-country fingers," "Agricultural valleys," to the scale of completing a building with ornament, light, and color, e.g., "Warm colors," "Different chairs," "Pools of light," and, "Things from your life."

There are millions of combinations possible from these patterns. In creating a certain space, Alexander, et al., advise one to first select a pattern that closest describes the scope of the project, for example, the arrangements of a garden. One is then advised to work up to the more inclusive patterns like "Sunny place" and "Outdoor room" and down to more detailed patterns like "Tree places," "Trellised walk," and "Garden seat." Though the patterns are arranged sequentially the authors advise that they be used as a network that can produce infinite patterns.

Alexander argues that each person creates a pattern language in his or her mind. This language is constantly growing from experience, both personal and cultural. No two languages are alike, but many patterns are shared. This becomes the basis for communication around the creation of towns, neighborhoods, and shared dwellings.

When one is faced with an act of design, one does not usually try to do it from scratch. The problem gives rise to stored patterns that become the foundation for creative design. The use of a pattern language, then, is organic, responsive, and sensitive to context. Goals and means are intimately connected. Standard processes are adapted to produce unique forms. The use of a pattern language builds upon the existing state of affairs to make it more whole, more unified, more complete. Design becomes a process of differentiation, beginning with the whole and then step by step unfolding the parts.

In this manner, a pattern language becomes a framework, a type of theory, that provides a means for organizing the representing the world. Alexander, et al., argue that today most people no longer have a pattern language, a coherent framework for representing or talking about how it is that they think about the world. The language that they propose is not designed to be the definitive language but to be a means for people to begin developing a language of their own.

A Pattern Language for Teachers?

It is the act of design that links the professions. Design is the process of bringing desired states into being by developing frameworks that guide future action. An architect creates a space for habitation or interaction by designing physical artifacts (buildings, court yards, rooms, etc.) that define space. A teacher creates a space for interaction, too.

This interaction is often of a special type--learning--interaction to create meaning, understanding, and skill. Teachers do this by designing patterns of social interaction and individual action (activities). The architect's means for creating meaning are form, structure, material, light, color, etc. The teacher's means are words and actions (as well as materials and environment). The architect creates ordered space. The teacher creates opportunities, occasions, and settings for interaction and growth.

Our research on teacher planning has emphasized the importance of design in teaching. We have described experienced teachers using powerful patterns in the form of activities and routines. We have described the planning process as a progressive elaboration of detail from general ideas. We have also observed the differentiation and modification of existing routines into more suitable patterns. In short, our experience suggests that effective teaching relies upon the use of a professional pattern language--a language of practice.

There is something intuitively attractive about the notion of a pattern language. There is a resonant quality to the idea of individual patterns overlapping and intersecting to produce a basis for communication, interaction, and culture. There may even be something to the notion of patterns being engrained from the beginning of cultures in the forms of buildings and communities. Are there similar patterns in age-old activities such as worship, celebration, and teaching? Is there a finite set of possibilities or patterns that we seem comfortable with or that work? What would a pattern language for teaching be like?

A language of practice for teaching must be a language of action, a language of practical action. It must be more than just a language of method, or a language of outcomes, or a language of content. It must somehow weave these components together as integrated patterns that illustrate practice as an artful combination of ends and means. A language of practice for teaching must also combine action with conditions where certain action is appropriate. The production systems described by cognitive psychologists are primitive patterns that embody conditions, means, and action. We need, however, to represent practice in larger, more visible patterns that are more accessible to the practitioner because they use more meaningful units of thought and action.

I am currently exploring the possibility of developing a pattern language for teaching, but it would be premature to propose my ideas here. I do, however, want to conclude with some ideas about how we might begin to discover the language of the practice of teaching.

1. We need to spend a lot of time in classrooms observing and talking with teachers. We need to especially pay attention to process and stay long enough to observe repetition and change over time. There really is something to be discovered from the "wisdom of the practitioner."

2. We need to pay attention to teacher language. How do teachers talk about what they do? How do teachers share their experiences with each other? How does the language of novice teachers change over time?

3. We need to pay close attention to the interactions between expert and novice teachers and between master teachers and student teachers. These interactions may be a strategic research site for understanding and describing the language of practice and how it is learned.

4. We need to as much as possible enter classrooms with open minds. Naturalistic research methods are more likely to be sensitive to finding out what is really out there than prespecified observation and coding schemes.

There is much that we do not know about learning to teach, and we need to use methods that are adapted to description and portrayal.

David Perkins in his book The Mind's Best Work (1981) relates a story about expectation, discovery, and surprise that I think contains an important reminder to researchers.

> A couple of years ago, my oldest son accosted me with news from kindergarten as I came home from the office. he had learned something about apples and wanted to demonstrate. Out of the drawer came a knife, one of those he was not supposed to handle, and out of the refrigerator a McIntosh.
>
> "Dad," he said, "Let me show you what's inside an apple."
>
> "I know what's inside an apple," I said, riding for a fall.
>
> "C'mon, just let me show you.
>
> "Listen, I've cut open lots of apples. Why ruin an apple just to show me something I already know?"
>
> "Just take a look."
>
> Ungracefully, I gave in. He cut the apple in half, the wrong way. We all know the right way to cut apples. One starts at the stem and slices through to the dimple on the bottom. However, he turned the apple on its side, sliced the apple in half perpendicular to the stem, and displayed the result.
>
> "See Dad. There's a star inside."
>
> Sure enough, there was. In cross-section, the core of the apple made a distinct five-point star. How many apples had I eaten in my life, cutting them in half the right way and never suspecting the hidden pattern waiting for me until one day my child brought news of it home, out to convert the infidel--and he did (p. 288).

How many teachers have we observed in classrooms never suspecting the hidden patterns waiting for us, because we thought we knew how to slice the apple?

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Induction Programs: Reports from Three Sites

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The closing session of the conference consisted of a panel discussion which focused on selected programs established for the induction of new teachers. The three panelists represented different role groups and different induction programs. Debra Tennyson-Carlton, a teacher from Oklahoma, discussed the new Entry-Year Assistance Program created in 1982-1983 in response to a legislative mandate. Discussion of a local response to the needs of new teachers in the Lincoln Public Schools was provided by Betty Dillon-Peterson, Director of Curriculum and Staff Development. Finally, Charlotte Springfield described the program recently established in Florida in response to a legislative mandate. Each presentation is summarized separately.

Entry-Year Assistanceship Program (Oklahoma)

Prior to the new state mandated induction program, many Oklahoma schools relied upon the buddy system for new teacher support. Tennyson-Carlton related several instances where new teachers faced serious problems adjusting to the new job responsibilities. The informal buddy system simply did not appear to respond to organizational problems, such as numbers of students needing special attention, or the personal problems, such as the overwhelming workload of the new teachers. To address these situations and others, the new induction program was instituted.

According to legislative mandate, the new teacher in Oklahoma does not receive a certificate to teach until the entry-year assistanceship program has been successfully completed. When a new teacher is hired a local committee is appointed which consists of (1) a teacher consultant, (2) a district administrator, (3) a faculty member of a college of education, and (4) the entry-level teacher. The teacher consultant, administrator, and university representative are required to observe the entry-level teacher three times during the year at specified times and to meet with the entry-level teacher as a group after the observations. A standard observation instrument is provided. Although the committee chair, the observer, and the entry-level teacher each keep a copy of each observation record, at the end of the year the entry-level teacher receives all copies of the observation records. The committee forwards to the State Department of Education simply a recommendation for certification, non-certification, or continuation for a second year in the entry-year program.

Helping Teacher Program (Lincoln, Nebraska)

The second panelist, Betty Dillon-Peterson, described the 18-year history of the locally developed, Lincoln, Nebraska, Helping Teacher Program, the structure of the program, and its adaptation as conditions in the district changed. Dillon-Peterson also shared examples of program activities and spoke briefly about how the program is evaluated.

Under the guidance of the personnel office, the Helping Teacher Program was originally designed to meet the needs of both the district, which was coping with large numbers of new teachers during the baby boom years, and the new teachers, who were expected to "fight their way into the closed systems." Like Oklahoma prior to the Entry-Year Assistance Program, Lincoln relied upon a buddy system with the usual variation in the quality of the implementation of that system among principals in the schools. The new program demonstrated a considerable commitment of district resources for the purpose of easing the entry of new teachers into the Lincoln public schools. To this end three "experienced master teachers" were selected to serve staggered, three-year appointments as full-time "helping teachers" who would work with new elementary teachers. They were "to visit" new teachers on a regular basis and "to take notes, to give feedback, and also to be on call." They had the additional responsibility of sharing information about poor performances of new teachers with the personnel office. One of the more popular components of the program was the "new teacher visits;" every new teacher had the option of visiting the classroom of an experienced teacher for one half day during the entry year. Throughout the year a series of meetings, planned by helping teachers to cover certain topics for new teachers, were conducted.

The content of the Helping Teacher Program was multifaceted. Attention was given to social, administrative, and instructional needs of new teachers. Under the component titled "Care and Comfort," the major function of the helping teacher was to "hold hands" and provide a "listening ear;" in other words to establish a non-judgmental, supportive relationship with the new teacher. The second component, "Information," was designed to provide the "nitty-gritty" of the setting; where to park, how to get supplies, and so on. The final component consisted of "Helpful Hints" for discipline, student management, classroom organization for instruction, and teaching strategies. These hints often consisted of "practical, down-to-earth lists of things to do" such as how to arrange chairs for reading or where to place reading materials in the room. On the whole, program emphasis was on meeting the immediate, personal needs of the new teachers by providing (1) a knowledgeable "friend" and (2) immediately useful, concrete and practical suggestions for the classroom.

According to Dillon-Peterson changes in the personnel and administrative needs of district have occurred over the history of the program. While the number of new teachers entering the district each year has decreased from approximately 360 to approximately 45, those teachers currently entering the profession in Lincoln are "more secure, confident, and well-prepared." Structure of most elementary schools has changed to "team arrangements" which provides more opportunities for naturally occurring interactions among new and experienced teachers. The district has also shifted to a building level administrative focus where principals often share management responsibilities with "team" leaders and department heads. Increased emphasis has been placed upon instructional supervision for all teachers which has translated into more observation of all teachers, including new teachers. As a result of these administrative changes, communication between and among the staff has become more open; genuine support systems have arisen naturally.

Fundamental changes have been made in the Lincoln program to respond to these changes in the district. The original helping teacher role was filled by three teachers who were released completely from their own classroom responsibilities. Currently a helping teacher "cadre" exists which is made up of these full-time teacher "leaders" and other helping teachers who are each given some release time to work with a specific new teacher in an informal way. One helping teacher leader is responsible for the oversight of all elementary level new teachers while another is responsible for all secondary level new teachers. Since the helping teacher program has been supervised for the last 14 years by the staff development office instead of the personnel office, the emphasis of the program has gradually become the "life-long development of the professional" rather than the more narrow focus of easing new teachers into the system. Program activities have evolved from the regularly scheduled, agenda-driven meetings to more collegial interactions with mutual sharing of expertise between experienced and new teachers. New teachers are also encouraged by the helping teachers to "assess their own strengths and weaknesses" and to develop "independence and self-reliance." Another change is an apparent lessening of the evaluative function of the helping teachers which existed when the program was under the aegis of the personnel office. The current focus is upon assistance.

In Lincoln, activities directed toward the new teacher begin well before school starts. As soon as the new teacher is employed by the district, a helping teacher sends a personal letter welcoming the new teacher to the district and explaining the role of the helping teachers. Helping teachers also hold an early materials review for new teachers where resources and textbooks, for example, are available for examination and helping teachers are prepared to answer questions about the materials. The Helping Teacher Program also sponsors a luncheon which provides an opportunity for new teachers to interact with their principals in a social atmosphere.

With the beginning of school, the several activities for new teachers occur. Brief orientations to the district and schools are held with dissemination of information on insurance, retirement and so forth held to a minimum. Most attention is given to more basic personal, organizational, and social concerns of the new teachers, like meeting administrators and other faculty members. Within the first ten days of the school year, the helping teacher leaders visit informally with all new teachers. Each new teacher is also assigned to a helping teacher who is based in the same school, if possible. A hotline has also been established to facilitate communication with helping teacher leaders; home telephone numbers are also exchanged. The program then provides avenues for "continuous contact" among the new teacher, his/her helping teacher, and helping teacher leaders.

In order to maintain the quality of the program, the Lincoln school district has assumed certain responsibilities. The staff development office provides training in needed skills for helping teachers, principals, team leaders, and department heads. The personnel office interviews new teachers late in their first year and asks for their feedback on the Helping Teacher Program. The responses are channeled back to those responsible for the program. Evaluation of the effectiveness of the helping teacher program is based upon the satisfaction of the new teacher with their first year in Lincoln Public Schools, i.e., whether they felt "accepted" and "comfortable."

Beginning Teacher Program (Florida)

The final panel presentation was given by Charlotte Springfield from the Office of Preservice Teacher Education. Springfield described the development of Florida's legislatively mandated beginning teacher program which is currently in its first year of implementation. The underlying assumptions, stated purposes, and the requirements of the program, as well as initial efforts at implementation of the program, were presented. Springfield also discussed both the unexpected benefits occurring as outgrowths of the program and some of its problems.

The stated purposes of the beginning teacher program are based upon several assumptions, according to Springfield. The assumptions are (1) the first year of teaching is a "very unique period" which is "probably the most difficult in a teacher's career," (2) the lack of a formal support system contributes to the number of teachers who leave the profession, and (3) the responsibility for maintaining quality in teaching rests with the profession. A coalition of university and school district representatives met to design a beginning teacher program which would serve two purposes: support new teachers entering the profession and verify their teaching competence. University personnel working through and with teacher education centers studied the available knowledge base regarding teaching skills, developed a performance measurement system and provided training throughout the state.

As the beginning teacher program is now structured (1983), each school district in Florida submits to the state a beginning teacher plan incorporating several requirements. A support team, which includes a building administrator, a peer teacher, the beginning teacher and another educator, must be a component in the district plan. Beginning teachers also receive two summative observations and participate in conferences. A professional development plan for each new teacher is required, as well as the maintenance of a "portfolio" containing evidence of the new teacher's demonstration of teaching competencies. A research-based, reliable, and valid instrument for the performance evaluation of the new teachers is also required. The districts may choose to use either the state-provided evaluation instrument or custom design one which meets the stated requirements of validity and reliability. At the end of the first year, the support team recommends certification or noncertification.

Within the state mandated structure, each Florida school district is free to decide how to conduct the program. In some districts, peer teachers are receiving increased pay and/or release time to work with new teachers; in others neither pay nor release time are provided. In some districts support groups are formed which hold regular meetings. Other districts hold orientation meetings and/or problem-solving sessions as needs arise.

Springfield also discussed some of the unexpected benefits occurring with the implementation of the new program. Despite initial resistance by some principals to inservice training related to the new program, many principals adopted a more positive attitude toward research on teaching and, after receiving the training, toward the usefulness of that training. Some requested further training both for themselves, especially in using the observation instrument, and for experienced faculty specifically in the teaching competencies identified for evaluation. Some peer teachers who have received training have stated their intentions to use that knowledge in their own classroom teaching. Some experienced classroom teachers have also reported that their principals are conducting more useful supervisory conferences. The teachers attributed the increased quality in their conferences to the principals' training for the Florida beginning teacher programs. An increased sense of professionalism was also noted among some peer teachers by Springfield.

In addition to the unexpected benefits, several problem areas were briefly described. These included:

(1) the difficulties inherent in translating research vocabulary into meaningful terms for principals and peer teachers;

(2) the attitude of some principals that the beginning teacher program is only one more responsibility involving paperwork;

(3) the minimal emphasis placed on training in supervision given the peer teachers;

(4) lack of understanding by support teams of evaluation procedures, specifically in the use of both the summative observation instrument and the portfolio;

(5) the small number of university personnel used by districts for the support teams; and,

(6) the focus on technical teaching skill competencies at the expense of beginning teachers' concerns as individuals.

Springfield also mentioned a problem with teachers trained in other states. This group constitutes more than 60% of the new teachers in Florida. The competencies identified by Florida as the minimum for beginning teachers are not necessarily those emphasized in the curricula of teacher education programs in other states. The last problem noted was that of sufficient numbers of qualified peer teachers in particular settings such as small, rural districts. Some peer teachers may be responsible for several new teachers in such situations. This places a considerable burden on the peer teacher.

In closing, future development activities related to the induction program were described by Springfield. The state is currently evaluating the first year's implementation of the program, as well as further validating the observation instrument. Instructional modules, coordinated with the 24 teaching competencies, are being developed by university personnel for use by peer teachers with the new teachers.

The programs described by the panelists exhibit several common elements and some basic differences. All programs currently provide for a "support group." In the past, support for new teachers was often supplied on an informal basis by the buddy system. Since the new programs require support groups, the assumption was made that the support group idea was a good one which had been poorly implemented in many cases. Requiring this component has now institutionalized both the concept of the support group and certain implementation standards for their work. All programs described require representation on support groups by teaching staff in the local schools, usually the school where the new teacher is assigned. Both of the legislatively mandated programs also require representation of the administrative staff and allow representation of institutions of higher education. The impression drawn from the panelists' discussion is that the university personnel have participated on support teams more often in Oklahoma than in Florida.

The most basic difference between the legislatively mandated programs and the locally developed programs seems to be in the focus of program activities. The local program in Lincoln appears to focus mainly upon assistance to the new teacher while the programs in Oklahoma and Florida focus more heavily upon assessment. Since both of the legislatively mandated programs are tied to the certification of the new teacher, a process of assessment becomes a necessary component to the program. Oklahoma does appear to place fairly even emphasis upon both assessment and assistance in that peer teachers are required to meet for a certain number of hours with the new teachers, as well as to observe and evaluate the new teachers.

In summary, the panelists' presentations brought to the conference a much needed status report from the field. Interest in the competence of teachers in general and new teachers in particular has increased in both the general public and the educational community. In some states this interest has led to the institutionalization of the process of inducting new teachers into the profession with emphasis on verifying their teaching competence. The information provided by the panel provides further justification for conducting research about the induction process and induction programs as they represent one of the fundamental changes occurring in the professional development of individual teachers and of the teaching work force.

Teacher Induction Issues: Themes and Variations

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This working conference was organized around two principal procedural components. First, Kenneth Zeichner and Robert Yinger presented papers regarding the induction of teachers. Those papers are included in this report of proceedings. Second, a series of discussions was initiated and sustained over the two days of the meeting. Because RITE staff deliberately invited persons widely knowledgeable about the topic of teacher induction, these discussions were particularly rich. They provided unique insights into the problems and prospects of studying teacher induction programs. Knowing the potential these insights would have for planning and implementing a multi-site study of beginning teachers, RITE staff audio-recorded and kept notes on many of the discussions and then synthesized the ideas, questions, and concerns that emerged from them. This chapter presents a brief summary of parts of these discussions.

The conference was attended by sixteen experts in the fields of teacher education, teaching, research, and schooling. These persons shared their knowledge with a willing enthusiasm that was greatly appreciated by RITE staff and their contributions were central to the production and implementation of a research design for RITE's Teacher Induction Study. This chapter focuses not so much on research related to induction as it does on the persistent themes and issues related to the phenomenon of teacher induction itself. It could not have been written without the shared perceptions of conference participants.

The chapter presents four themes that emerged from conference discussion groups. These themes and the issues related to them are the product of the present authors' synthesis and any misinterpretations or biases should be attributed to them and not to persons at the meeting. The themes are (1) roles and responsibilities related to teacher induction programs, (2) institutional relationships in induction programs, (3) expectations for induction programs, and (4) workplace norms and characteristics related to teacher induction.

Roles and Responsibilities Related to Teacher Induction

Programs designed to help students of teaching become teachers naturally involve people. These people can (some say should) work together in some fashion such that new teachers become knowledgeable, skillful, and contributing members of school organizations. Further, these people have different roles. This section presents some of the issues regarding how those roles and responsibilities are, and can be, thought about and acted on.

University personnel. It was acknowledged by conference participants that university staff have a large stake in the promotion of successful experiences for new teachers. They are, of course, hopeful that school district officers can and will see the consequences of their work as producing competent and skillful teachers. They are mindful of the fact that a school of teacher education must maintain a reputation for turning out graduates who are successful in schools and classrooms. In sum, they know that their institutional and personal professional reputations are, to some degree, on the line in terms of the ways in which their graduates are perceived in the first years of teaching.

But, what participation in teacher induction programs beyond initial teacher preparation is assumed (or could be assumed) by higher education teacher educators? Conference participants noted four general patterns, not universally present but observable enough to suggest current and historical practices. First, and probably most prevalent, is the follow-up of teacher education graduates through survey-type instrumentation. Typically, the results of these surveys note where the graduate is employed, provide self reports of perceptions about adequacy of preparation, and include demographic descriptions of respondents. (These are particularly useful to colleges as they engage in accreditation activities.) Second, individual teacher educators work with school systems on a sporadic basis in consulting or school improvement roles but with little, if any, specific attention given to new teachers from their own institutions or others. Third, university staff conduct research focused on both newer and more experienced teachers, increasingly using participant observation techniques. These techniques often involve the asking of questions which encourage reflection on the part of teachers. Fourth, and most infrequent but growing as a practice, is the participation of teacher educators in ongoing programs specifically designed for new teachers. This participation can be locally initiated between a univeristy and a school district or can be the consequence of a legislated "advisory group" to new teachers that mandates that a teacher educator be a member of the group.

In addition to these four modes of induction-related practices, participants noted several difficulties faced by university staff who attempt to involve themselves directly in the induction process. In the first place unless there is a strong research focus and pay-off for school-based activities, the professor who engages in them does so at his or her professional peril. Secondly, university-based educators differ sharply from school-based educators in their views of teaching and schooling. Probably based on real differences in educational backgrounds and workplace norms, their different views of teaching and schooling complicate possible university and public school collaboration. One complication resulting from these differences is that university personnel are not as sensitive to school and district-related problems and priorities as would be desirable. This often manifests in an aloof, superior attitude on the part of university personnel which hampers collaboration. One participant characterized this as a "missionary" orientation, wherein university personnel approach schools with an a priori set of fixes to "improve" teaching and schooling, but with little appreciation of the specific features of the given schools.

In light of these difficulties the conference participants indicated that the most promising role of university-based personnel in teacher induction programs is that of researcher, more specifically, "intelligent question asker." Several recounted their own experiences as participant observers in which fortuitous instances occurred of teachers reflecting on their educational practices, apparently as a result of their interactions with the researchers. Conferees agreed that this type of university role was much preferable to the more usual missionary approach which they had earlier criticized. They felt that in the role of intelligent question asker a university researcher could be quite effective in helping all teachers, but particularly new teachers, to look at their contexts and to discover ways of being effective in them.

Furthermore, as researchers, university personnel could reduce many of the difficulties that they have often encountered when attempting to collaborate with public school personnel. From the standpoint of professional advancement, research interventions are obviously preferable to a priori "improvement" interventions, in that they can potentially advance educational theory. As intelligent question askers university researchers will be able to inform themselves about specific school and district contexts. This in turn should result in their greater sensitivity to the problems and priorities of teachers and administrators in the public schools.

Many conference participants indicated that as nonevaluative observers and question askers university researchers would be perceived as colleagues rather than as missionaries and, therefore, would be in an excellent position to stimulate dialogue about and reflection upon teaching and schooling. In Yinger's terms university researchers could provide a credible link between the language of theory and the language of practice.

Although the research role of university personnel could benefit teachers at virtually any level of experience, the conference participants especially stressed the potential benefits for beginning teachers. It was generally agreed that university personnel could contribute most to ongoing induction programs in the capacity of researchers. In addition to the abovementioned benefits, as part of an induction team, the university researcher could help link preservice and inservice teacher education programs, contribute a point of view beyond that of the immediate classroom, help new teachers see that they are engaged in more than the dailiness of school, and provide a range of ideological and material resources not typically found in school district. In these concrete, helpful ways university personnel could substantially change the common perception of them as irrelevant to the "real world" of teaching.

School district administrators. Conference participants expressed a variety of views regarding the role of school administrators in induction programs. These varied from the position that the administration of a school district is ultimately accountable for the consequences of schooling and, therefore, administrators should have major responsibility for determining what new teachers should accomplish and how they should accomplish it to the view that administrators should adopt a "hands off" policy and provide only support assistance to an induction program.

The more generally agreed-to position was that administrators should participate with others in the formulation and implementation of an induction program to the extent that they can help translate district policies and expectations into practical assistance and assessment activities. It was further agreed that balancing assistance with assessment was a persistent problem in terms of supervising and administering instruction. It is a rare school principal or central office administrator who can convince teachers, new or otherwise, that he or she can, on the one hand, be receptive and responsive to teachers' problems and, on the other, not use the knowledge gained through that receptivity for evaluative purposes. And, conversely, it is a rare teacher who can sort out those distinctions such that he or she does not become conservative and defensive in dealing with persons who are charged with both helping and evaluating.

In terms of induction programs, however, it was agreed that school administrators should be centrally involved in identifying and articulating the goals of the school district and providing consistent and systematic opportunities for new teachers to accomplish those goals.

Peer teachers. A relatively new concept regarding working with new teachers is the formalization of the "peer teacher" role. Of course, the practice of using a so-called "buddy system" has been informally in place in most school settings for decades. In the latter case, a new teacher is assigned (or more often finds) a more experienced teacher to act as guide, confidant, and expert in terms of the school setting. Conference participants acknowledged that the buddy system is only variously successful and most often has been the means by which new teachers learn about the procedural demands of teaching. It has been less successful in terms of helping new teachers accomplish the substantive and pedagogical requirements of teaching.

Noting that most mandated induction programs formally include a peer teacher as part of an assessment/assistance team, the question of how the peer teacher might act out his or her role was addressed. Countering the historical perspective that suggests that teacher organizations have unconditionally defended teachers without publicly agreeing that some teachers are not qualified to teach, participants noted the trend for these same organizations to question the instructional abilities of some teachers. This shift, although certainly not yet widely publicized or observed, provides some minimal assurance that peer teachers can be considered as helpers as well as critics of new teachers' performance in schools.

A major question regarding the use of career teachers as either (or both) counselors and evaluators of new teachers is whether or not such a practice might be a further perpetuation of the status quo in teaching and schooling. It was noted by some of the conference participants that the reason for implementing an induction program was to counter prevailing ills in school systems. If that is the case, the argument goes, why use in induction programs those very persons who may embody the problems? This position was countered by the belief that every school setting has teachers who can be considered exemplary using certain criteria. It was pointed out, though, that even exemplary teachers would need to be trained and compensated for their role as peer teachers. Regarding training, conference participants related staff development experiences which clearly showed that excellent teachers may not know why they are excellent and would be hard pressed to communicate their ideas about teaching and schooling to a beginning teachers.

The distinction was made between expert and coach, and that the peer teacher needs training in the latter role. It was stressed that providing professional support requires a different set of skills than the practice of teaching, although they are related.

The role of the peer teacher was seen as a means to (1) provide a direct link to the present teaching force in terms of values and beliefs about teaching, (2) initiate the new teacher into those values and beliefs, (3) make available "expert" advice about pedagogical and curriculum requirements and practices, (4) provide advice and counsel that might be perceived as less threatening than if it came from an administrator, and (5) create expectations for quality teaching across the teaching force. The issue of whether or not the peer teacher can also be a part of an assessment team (i.e., a decision making group in regard to retention or dismissal) was raised and the complexity of that idea was acknowledged although there appeared to be little agreement as to how to deal with the problems.

The new teacher. The principal focus of the working conference was, of course, the new teacher. Although the attention given to the new teacher was, at the beginning of the meeting, largely focussed on this person as a novice who, almost by definition, needed some kinds of help, that point of view shifted a bit during the course of the sessions. It was noted that all new teachers do not fit the stereotype of the undereducated, less-than-able, floundering newcomer. Some bring to their first assignments well-developed skills, precise sensibilities, and fresh ideas and practices. As this variation in new teachers was acknowledged by conference participants, the discussion regarding the role of the new teacher in induction programs became more complex.

It was agreed that the new teacher should receive some specialized attention from the school system. The nature of that attention, according to conference members, ranges in current practice from benign neglect through systematic assistance to pure assessment. Participants recalled observations of new teachers receiving district attention only at the time that contracts were to be renewed or denied. In other instances, new teachers were burdened with too much attention, such that they were distracted from any pinpointed, goal-oriented efforts to act on school and classroom issues.

In terms of induction programs, consensus seemed to suggest that new teachers should be part of a collegial group whose activities should be centered on helping the new teacher move from novice to expert status and that those activities might best be differentiated according to needs, strengths, and weaknesses as perceived by both the new teachers and other members of the collegial group.

Institutional Relationships

Probably because of the composition of the workgroup at the sessions (i.e., teacher educators, researchers, teachers, and school administrators), there was an implicit theme of institutional relationships that surfaced throughout the meetings. There seemed to be general agreement that school systems and teacher education institutions should work together toward the formulation, implementation, and evaluation of programs of teacher induction.

How this relationship could be accomplished, however, was less clear. There were sharp disagreements about historical and current practices in terms of whether or not they resulted in positive outcomes for institutional representatives or for new teachers. It was pointed out that state legislatures could mandate participation of college professors in induction programs but that the mandate would not effectively negate the typical low value placed upon field work by universities. Conversely, it was noted that although there is a great amount of talk about how such collaboration between institutions could be beneficial for all concerned, evidence that school-based educators believe they learn and grow as a consequence is limited.

The issue of status as a consequence of institutional membership was raised. Although believed by participants to be an unfortunate phenomenon, the view was expressed that higher education persons tend to either implicitly have or assume greater status (i.e., knowledge and expertise) than their elementary and secondary school counterparts. This was seen as a potentially dangerous situation in terms of teacher induction programs, particularly in the event that the new teacher might be caught in the crossfire. However, participants indicated that a research orientation on the part of university personnel would ameliorate this status differential, as discussed above regarding the role of university personnel.

There was some agreement that institutional collaborative relationships would be positive if status differences were resolved, if parity in collaboration could be accomplished, and if expectations for the consequences of the relationships could be agreed upon early in the process.

Expectations

Induction programs for new teachers usually embody explicit expectations. These expectations can be in the form of outcomes (or what is expected to happen as a consequence of the program) as well as in the form of processes (or what activities are expected to be engaged in by participants). This section presents certain of the conference deliberations regarding these two sets of expectations.

Outcomes. Participants noted that the induction programs of which they were aware generally stated outcomes in terms of some set of minimum requirements for new teachers. These minimum requirements were usually focused upon teaching behavior. The most common term used is "competence." In fact, many of the participants had some awareness of the competence areas that were typical. These almost always included classroom organization, management of student behavior, subject matter expertise, and the like.

There was some disagreement among conference members as to the rationality of using research findings as expectations for teacher induction programs. On the one hand, it was pointed out that certain teaching behaviors, singly and in combination, appear to be consistently related to positive pupil achievement. On the other, it was acknowledged that the studies from which these findings were derived were most often correlational and that experimental research had not yet provided a robust body of information that can serve as a substantial base upon which to formulate teacher induction programs. There appeared to be agreement across conference members that a reasoned and somewhat cautious approach to research on teaching findings, combined with a rationalized dependence upon conventional wisdom regarding teaching, could guide the formulation of expectations for induction programs.

Although it was generally agreed that a focus upon teacher behavior in classrooms was desirable and could be defended from practical as well as theoretical grounds, there was clearly articulated criticism of this point of view when it appeared to be the sole driving force in an induction program. It was repeatedly pointed out that teaching (or being a teacher) is much more than a set of observable and measureable behaviors that can be tallied much as one counts the chairs or tables in a classroom. Unless the conventional competencies (e.g., holds students accountable for homework) are balanced with more comprehensively stated specifications for teaching (e.g., teachers systematically reflect upon the consequences of their activities), an induction program would be unacceptable to many of the participants.

Also, the idea of "minimum" competence was criticized. The preoccupation with what might be termed the "least possible evidence" as gauging how well one conducts instruction and promotes learning was viewed by many as dominating the thinking of policy makers. This criticism stemmed from the belief that this view would (or could) reduce the expectations for new teachers and, as a result, cause a deterioration of excellence in teaching instead of promoting outstanding practice.

The view was expressed that induction programs should result in some valued outcomes for others than just the new teachers. Some participants saw induction programs as only part of a larger effort of school system renewal and improvement. Like the narrow set of teacher competencies, an induction program that was not coordinated with efforts across the school district could be less than desirable in terms of wise expenditures of human and material resources. Questions were raised as to what outcomes were expected to accrue to system officials, students, experienced teachers, and others.

Consequently, the conference participants discussed the possibilities associated with both broadening current conceptions of narrowly focussed outcomes expected of new teachers and promoting comprehensive sets of outcomes that could be beneficial to the school community and the people that comprise it.

Processes. As has been implicit in much of this paper, the issue of assessment vs. assistance was a persistent theme of the conference. Although there was no clear statement across the group favoring one or the other, it could be sensed that the majority sentiment was for assistance.

It is clear that process expectations regarding assistance will be different from process expectations regarding assessment. This distinction, of course, is less clear when one makes the compromise of stating a process expectation as being both assistance and assessment.

In an assistance program, it is likely that support mechanisms, collegial groups, diagnosis and prescription for improvement purposes, follow up, and the like will be part of the procedures. The degree of presence of these procedures, then, will determine in large measure whether the process expectations are met. Likewise, in an assessment program, it is likely that explicit evaluative criteria, schedules of systematic data collection, timelines for classroom observations, and such will be part of the procedures. Again, the presence or absence of the procedures will help to make the decision as to whether the process expectations have been met.

As in their discussion of peer teachers noted above, the conference participants were adamant in their insistence that all those charged with carrying out the program receive systematic training. This process is vital to the accomplishment of program goals. Although it is sometimes assumed that a peer teacher, for example, should be an expert in working with children, that expertise may not readily transfer to working with adults. Some means must be used to be certain that those who are to assist or assess new teachers can perform their tasks reliably and competently.

It becomes complicated, as noted earlier during the discussion of administrative role responsibilities, when assistance and assessment (i.e., evaluation) are combined in one program. The expectations for these programs become somewhat muddied and the possibility of misinterpretation of both professional and personal behavior of participants is a distinct possibility. It is not beyond one's imagination to speculate that a new teacher who is unsure as to whether his or her "peer teacher" is helping or providing information about retention or dismissal may be self-protective and, possibly, defensive in professional relations with that person.

Conference participants were inclined to lean toward implicit endorsement of the assistance-assessment program but were quick to point out its pitfalls, some of which have been noted here as they relate to induction program expectations. These potential problems should be dealt with in the formulation of the program's process and outcome components.

Workplace Norms and Characteristics

A persistent theme throughout the working conference was the degree to which the school as a workplace influenced (or could influence) new teachers and their inductions programs. In most common terms, this possibility is usually called socialization or institutionalization. There were certain issues related to schools that appeared again and again as they suggested whether or not teacher induction programs could or would work toward positive ends. The most frequently discussed ones will be included here.

Rewards. Just because it is a truism, the issue of low teacher salaries as it affects new (and career) teachers cannot be dismissed. Conference participants reflected the mood and the thinking of other educators as they noted again and again that teaching will probably not attract a substantial share of "the best and the brightest" until the salaries are competitive with other fields of professional activity. Although it is believed that teaching is considered a calling by some and that their answer to the call is the most powerful reward, the number of persons answering the call to become teachers is, or appears to be, diminishing.

To acknowledge that financial rewards from teaching are not powerful enough to attract large numbers of gifted people to the profession is not the same as giving in to the notion that rewards, therefore, are of no consequence to new teachers. Programs of induction, according to the participants at these sessions, should consider carefully the rewards that can be made available to new teachers and the persons working with them. Among the non-monetary rewards are opportunities for release time, reallocation of materials, public ceremonies of recognition, opportunities to exercise authority, and others. In general, it was agreed that conscious attention to the issue of rewards for participants, within the range of possibilities, would strengthen a program of induction.

The overriding theme related to school rewards, however, was the effect lack of rewards has upon the available pool of prospective teachers. It is believed that low salaries are directly related to what is perceived as a less able teaching force and, consequently, to the need for teacher induction programs to provide systematic assistance to novice educators. Further, the salary issue appears to be related to the fact that in some states as many as half of the teachers entering the profession in any given year will not be teachers after five years. This issue of turnover (as related to salaries) reinforces for some the need for teacher induction programs.

Isolation. Another truism related to teaching is its sheer loneliness. For various logistical and historical reasons team teaching is definitely the exception. Most beginning teachers will face the challenge of the self-contained classroom. Few professions require the degree of isolation from one's colleagues as does teaching. This, of course, presents special problems for the induction of beginning teachers.

Obviously, their isolation tends to interfere with their socialization, and unless special effort is made to place them in contact with others who can show them the ropes, they may stumble among procedural details. As pointed out before, the informal buddy arrangements which have functioned for decades probably serve to minimally inform new teachers about simple procedures and logistics. However, these informal arrangements do not generally result in comprehensive information sharing. Nor do they serve to lead to consideration of the more substantive issues of teaching and schooling. It was noted by several participants that interventions which reduce new teachers' isolation in a non-threatening, supportive manner such as participant observation or non-evaluative peer teacher consultation seem to have positive results.

Language of practice. Yinger observed that most professions have well developed technical languages with which their members communicate about their practices, but that teaching does not. In this sense it is a "semi-profession." Conferees agreed that this lack of a shared language impedes the development of collegiality, interferes with the analysis of teaching practice, and consequently makes the translation of research findings into practice much more difficult.

It was pointed out that teachers often communicate in anecdotes and that these, of course, vary from school to school. Although this type of communication may serve to maintain workplace norms and conventions for better or worse, it was judged inadequate for the tasks of analyzing practice and communicating research findings in order to promote positive change among teachers. This has important implications for induction programs whose aims include support for and guidance of beginning teachers toward more expert practice based on research findings.

It was suggested that induction programs should provide time and favorable conditions for new teachers to acquaint themselves with research findings and perspectives. This would promote the elaboration of a shared language of practice, a process which would undergird other elements of an induction program.

Curriculum. It was suggested that the curriculum which new teachers are obliged to use could have long term effects on their development as teachers. A performance-based curriculum, for example, may initially assist new teachers by reducing what may be at that point an overwhelming number of curricular decisions. Yet, as they become more accustomed to the curriculum, they may need more opportunities to make their own decisions for their further professional development. The degree of autonomy which new teachers have in their curricular decisions may also affect how effectively they can respond to the needs of their particular pupils. Finally, the type of curriculum used by the beginning teacher will probably determine to some degree the type and amount of support services needed.

Pupil ethnicity and social class. These workplace characteristics also received attention in the discussion. It was felt that a beginning teacher's capacity to take these factors into account in dealing with pupils and their parents would significantly influence his or her overall effectiveness. However, participants agreed that preservice teacher education programs did not and probably could not adequately prepare beginning teachers for pupils from backgrounds different than their own. Furthermore, it was pointed out that an onsite induction program could help beginning teachers deal with the ethnic and class characteristics of their particular students better than a more general, offsite preservice program could.

Conference participants indicated two areas of concern for beginning teachers especially affected by ethnic and class differences: interpersonal communication patterns, and parental attitudes and expectations (regarding discipline, achievement, and the role of the home). In order to illustrate the importance of sensitizing beginning teachers to ethnic differences in communication patterns, one participant pointed out that in several oriental cultures, it is disrespectful for children to look their elders in the face. The beginning teacher might misread an oriental pupil's averted eyes as a sign of inattention or worse, as a sign of disrespect. Although not all ethnic differences in communication patterns are so dramatic, it was agreed that beginning teachers should at least be made familiar with the ethnically derived features of their students' respective communication patterns which might cause problems.

Inasmuch as their parents' attitudes and expectations regarding schooling will affect the pupils' learning environment, it was thought that the beginning teacher should also be made aware of the ethnic and economic determinants of these parental attitudes and expectations. It was felt that the beginning teacher would then be in a better position to make their school experiences congruent with their home life. Furthermore, it was pointed out that this type of information could help reduce the anxiety of beginning teachers about parent conferences--a perennial area of concern.

A concern was voiced that pupils' ethnic and class characteristics be presented comprehensively enough to discourage simplistic stereotyping. Aside from this caveat, though, the conferees generally endorsed inclusion of this type of component in induction programs for ethnically and economically diverse school districts.

Summary

Four themes emerged from the conference discussion groups: roles and responsibilities related to teacher induction programs, institutional relationships, expectations, and workplace norms and characteristics.

The bulk of the discussions centered on likely or suggested roles and responsibilities for induction program participants. Perhaps the most important aspect of this discussions involved a reconceptualization of the role of university personnel from that of missionary to that of researcher. Most conferees believed that this shift in role would go far in linking theory and practice as well as concretely improving relations between institutions of teacher education and public schools. The difficulties faced by administrators and peer teachers as a function of their contradictory missions, assistance and assessment, were also discussed though by no means resolved. Finally, it was stressed that induction efforts should be differentiated according to the needs, strengths, and weaknesses of individual beginning teachers.

In their discussion of institutional relationships, there was general agreement that school systems and teacher education institutions should work together in the conduct of induction programs, and that status differentials between university and school-based personnel should be minimized. However, beyond these general comments, there was little consensus as to how these institutional changes should occur. Regarding outcome expectations, participants urged that they be based on more than laundry lists of behaviors derived from correlational studies. It was felt that these behaviors should be considered as only one type of outcome. Other types of outcomes might include affective outcomes such as satisfaction and positive attitude changes. Also, it was pointed out that induction outcomes should correspond with other desired school and district-wide outcomes.

Discussion of process expectations centered on the difficulties of combining both assessment and assistance activities. In light of these difficulties it was stressed that all those on the assistance/assessment team should be well trained for their duties.

Finally, conference participants discussed how and why various workplace norms and characteristics should be attended to in the design and implementation of induction programs. The general problem of low salaries was noted, and various non-monetary rewards for induction participants were suggested. These included release time, reallocation of materials, public recognition, and opportunities to exercise authority.

It was generally agreed that the isolation of beginning teachers from their colleagues was peculiar to the profession of teaching and that it presented a problem to the induction process. Non-threatening, supportive encounters with peer teachers or other support personnel was endorsed as an integral component of future induction programs.

As the isolation of beginning teachers impedes the development of collegiality, so, too, does their lack of a common language of practice. It was pointed out that teachers' anecdotal patterns of communication are specific to their respective schools. Thus, beginning teachers are particularly at a disadvantage. It was suggested that induction programs should provide opportunities for new teachers to acquaint themselves with research findings in order to promote a shared language of practice.

Conferees discussed effects of various curricula on beginning teachers' professional development and on the types and amounts of support services that would be needed.

Pupil ethnicity and social class were also considered to be important workplace characteristics which should be taken account of in the induction process. It was argued that the more familiar beginning teachers could become with communication patterns and parental attitudes which are characteristic of their pupils' respective ethnicities and class position, the more effective they could be in the classroom. It was felt, therefore, that induction programs should include components to achieve these ends.

Conclusion

As mentioned at the beginning of this chapter the discussions on which it is based were carried on over two full days. Thanks to the conference participants, these discussions were far richer than can be reflected here. However, the authors feel that the principal themes and variations have been faithfully reported, of course, taking full responsibility for any omissions or misinterpretations. These discussions have already borne fruit in the design and implementation of the RITE Teacher Induction Study, currently in progress. The RITE staff will continue to reflect on them as the study progresses and as the findings are reported. It is hoped that this report will in like manner help focus other research efforts on teacher induction.

Appendix A

Conference Participants

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Elizabeth Wilson
Designs for Education and Corporation
for Public Broadcasting

Robert Yinger
University of Cincinnati

Kenneth Zeichner
University of Wisconsin at Madison

Appendix A (cont.)

Research in Teacher Education Staff

Research and Development Center for Teacher Education

The University of Texas at Austin

Gary A. Griffin, Program Director

Susan Barnes, Assistant Director

Sharon O'Neal
Maria Defino
Sara Edwards
Hobart Hukill
James Hoffman

Pauline Walker Lupita Guzman Luana McLarry